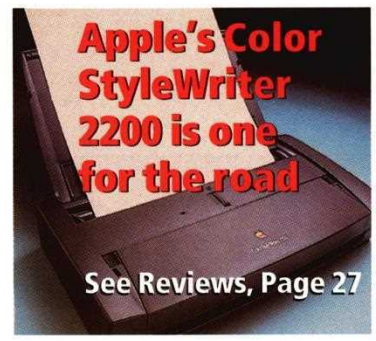
MacWEEK

07.17.95 | *The Newsweekly for Macintosh Managers* | VOLUME 9 NUMBER 28



FIRST LOOK

PageMaker 6 lays out solid, limited upgrade

By Pamela Pfiffner

It's been 10 years since Aldus Corp. first introduced the page-layout program that helped launch desktop publishing. So the timing couldn't be better to unveil PageMaker 6.0, the latest version of a steady, if not stellar, performer striving to regain its somewhat faded glory.

Ever since Adobe Systems Inc. bought Aldus last year, we've been waiting to see what the corporate doyen of graphic arts software will bring to PageMaker. With the $895 PageMaker 6.0, due out for the Mac in late August

See PageMaker, Page 76

PageMaker 6.0's multiple-master pages let users assign right and left pages independently. The program also adds a feature for non-printing items.

NEWS ANALYSIS

PowerPC-based Performa pricing on par with PCs

eWorld browser, MPEG card ship

By James Staten

Apple this week will ship a new lineup of Performa products, including two new PowerPC-based machines, a DOS-compatible unit and an MPEG playback add-in card. But prices and configurations may be the real story.

Along with beefier configurations of the Performa 6100 and 630 (see MacWEEK, June 26, Page 1), Apple will ship two new PowerPC-based lines, the Performa 6200 and 5200. The 5200 line is identical to the computer-and-monitor-in-one LC 5200, while the 6200 line puts the 5200 logic board in a Quadra 630 case.

Both are powered by a 75-MHz PowerPC 603 processor and feature slots for video and communications hardware, including Ethernet and a television tuner. Each unit comes with 8 Mbytes of RAM, either an 800-Mbyte or 1-Gbyte drive, the AppleCD 600i

See Performa, Page 74

NEWSPAPER SECOND CLASS

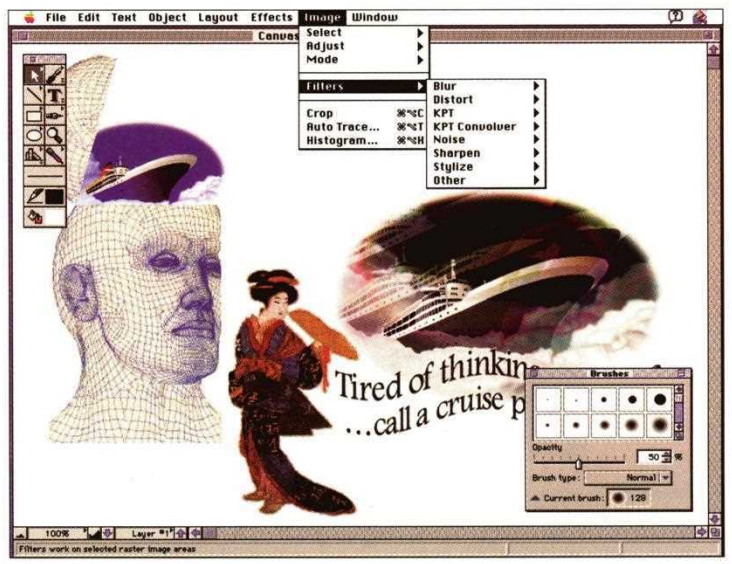
Image editing and DTP to stretch Canvas 5.0

Overhauled app to debut at expo

By Cate C. Corcoran

Giving new meaning to the term "major upgrade," Deneba Software of Miami is reportedly working on a revision of its Canvas illustration application that may turn the program into the Swiss army knife of graphics applications, sources said.

Canvas 5.0, reportedly slated for a Boston Macworld Expo introduction in August and a year-end ship date, will broaden the scope of the application to include image-editing, page-layout and presentation capabilities while dramatically revamping illustration tools, sources said. Overall improvements include ColorSync 2.0 support, unlimited Undo and Redo, and the ability to output files in Adobe Acrobat's Portable Document Format.



Canvas 5 will for the first time let users edit raster images with feathered brushes, color-correction controls and Photoshop-compatible plug-ins.

Canvas 5's interface will be based on expandable floating palettes that will appear when users double-click corresponding tools in the tool palette. Palettes will use tabs to organize settings and will expand to expose more in-depth functions. Choosing a Clean Up Palettes command will collapse all palettes into one cor-

See Canvas, Page 74

Apple joining Oracle to hawk Power Objects

By Andy Patrizio and Wendy Pickering PC Week staff

Oracle Corp. and Apple are finalizing a marketing and sales agreement that will reportedly allow Apple to resell Oracle Power Objects client-server development tools through the retail channel.

Sources said Apple plans to sell both the Power Mac and Windows versions of Power Objects, which are due to ship July 26. IBM Corp. will participate in the announcement, throwing its marketing weight behind the OS/2 version to be released at the same time. The single-user Power Objects, previously known as Project X, will be

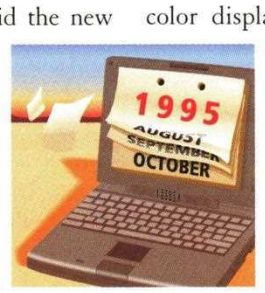
See Oracle, Page 74

New PBs slow in coming

By James Staten and Jon Swartz

Apple is expected to announce its PowerPC-based laptop line Aug. 28, but some models may not ship until October.

Apple originally said the new PowerBook line was slated to ship in the first half of 1995 before revising its target date to this summer. Sources said the company's latest story is that it will ship the models on a staggered schedule that could stretch out an additional six to eight weeks.



The trio of all-in-one PowerBooks, code-named M2 and now dubbed the 5300 series, are expected to ship in limited quantities starting at the rollout. The units will be based on a PowerPC 603e processor running at either 100 or 117 MHz and will feature color displays. Pricing will reportedly range from $2,299 to $6,999.

On the same date, Apple will unveil the 2300c, a PowerPC-based Duo expected to be priced at $2,199; a RISC upgrade card for the PowerBook 500 series; and an upgrade path for current Duos to the 2300c's logic board (see MacWEEK, May 1, Page 1). Entry-level laptops using

See PowerBooks, Page 76

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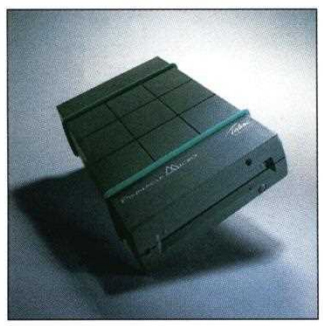

The Tahoe 230 MB is the world's first portable optical drive, weighing only 1.8 lbs. It offers quick access time and fast data throughput, with each rewritable 3.5"disk storing 230 MB of data. With its optional travel case and battery pack, the Tahoe is the perfect solution for users on the go. *$795*

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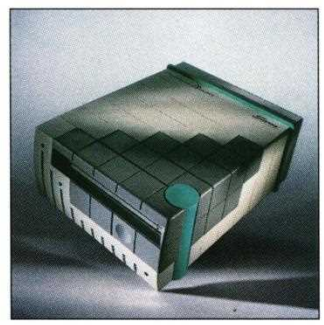

The Sierra 1.3 GB is the industry's fastest optical drive. It can be used as both a hard disk replacement and an on-line archiving system. Each 5.25" cartridge holds 1.3 Gigabytes of data, and boasts a 30-year shelf life. It is ideal for data-intensive applications such as graphics, CAD/CAM, multimedia or data archiving. *$2,495*

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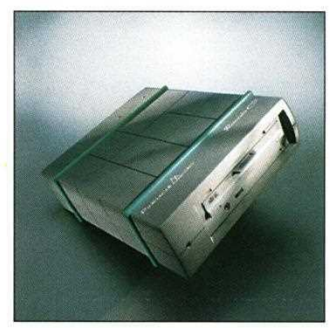

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MiniCad turns 6 • QX-Tools enhances XPress • The PCI revolution in digital video • AT&T system prints on demand

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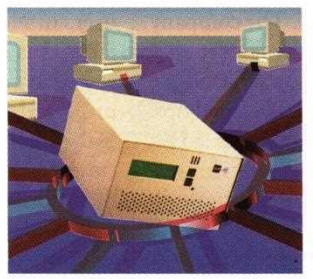
22 BUSINESS

Lack of Mac shelf space • Boca Research snaps up Hayes • Mac software sales up

While video editors prefer Mac-based systems, deciding which ones are bargains and which ones aren't can be complicated. See Solutions, Page 37.

Apple outlines plans to secure more retail shelf space for Mac software titles. See Business, Page 22.



MediaNet and SCSI-Net are hardware-software LAN solutions that help multimedia shops boost performance. See Gateways, Page 16.

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Apple Color StyleWriter 2200 takes printing on the road • DayStar 100 MHz PowerPro 601 breathes life into old Macs • Ray Dream AddDepth 2.0 • AG Group NetWatchman 2.2 • APS HyperTape • Reviews Forum

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Mac-based editing systems remain the first choice of digital video editors.

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MACWEEK INSIDER CAROLYN SAID

No. 1 is still second-best

With its first upgrade of PageMaker, Adobe Systems Inc. is offering a feature-packed new release, well-equipped to face the competition — circa 1992.

I always feel bad criticizing PageMaker: In support and customer relations, the program (under the auspices of both Aldus Corp. and Adobe) towers over QuarkXPress from Quark Inc., a company that treats its customers like a nasty smell emanating from under the couch.

But while features such as multiple master pages, grouping and locking will be welcomed by PageMaker users, the question remains why the leading page-layout program, at the ripe old age of 10 years this month, took so long to achieve such basic capabilities — and ones that XPress has long possessed.

To give Adobe credit, some enhancements, such as the built-in color management, easy support of alternative color-management systems, on-line publishing capabilities, and built-in trapping, show its strong attention to improving the user experience. But overall, PageMaker 6.0 is not a breakthrough.

Adobe's acquisition of Aldus happened during the two years that elapsed since PageMaker 5.0, no doubt slowing development progress. But that's still a long time to produce an upgrade that comes nowhere near being the rumored Quark killer Aldus had under wraps for years (remember PageMaker Professional?).

I'm not a power user of desktop publishing software. I had one modest request of PageMaker: the capability to flow text within a circle or other graphic. "Hmm, we don't have that yet, but many users have requested it and I'm sure we will sometime soon," said the nice people from Adobe. "Did you figure out a work-around?"

I sure did — I did it in XPress.

Multiply my piddling request and my solution times umpteen such inquiries from umpteen users and you have the story of the "professional" DTP market. Publishing pros pick XPress because it has the set of features they need. PageMaker still doesn't cut it with these folks.

PageMaker is the top-selling publishing application and a solid solution. It's just that its users are churning out newsletters, brochures and marketing materials, while XPress users are producing national magazines, daily newspapers and slick advertising spreads.

Take a look at Deneba Software, which also just took two years to produce an upgrade to Canvas. Like Adobe, Deneba had to develop a new version that runs on 680x0 Macs, Power Macs, Windows 3.x, Windows 95 and Windows NT. But unlike Adobe, Deneba achieved a phenomenal transformation of its application, one that not only increases its capabilities as a draw program but expands its scope into image editing and simple page layout — both Adobe strongholds. Of course, maybe Deneba was faster on its feet because it wasn't hobbled by being the market leader in its category. Being No. 3 can be a truly motivating experience.

Adobe said, "Did you figure out a work-around?" Yup: I did it in XPress.

If Adobe is to compete successfully with Quark in the professional DTP market, where the cutting-edge users are, it needs to take its cue from Deneba: produce a major overhaul of PageMaker — and fast.

It's going to be tough to convince the service bureaus that have let their PageMaker skills atrophy and professional sites that have invested thousands of dollars and hundreds of hours into XPress training to switch to PageMaker.

By 1996, Adobe must be able to present a convincing case to production-oriented sites why they should consider PageMaker a viable alternative to XPress. And to do that it absolutely has to match XPress feature for feature — then surpass it.

Adobe has the clout, technology and people power to usher in a sweeping new PageMaker that can wow high-end users. And you'd better believe that XPress users wouldn't mind having an alternative that comes with good user support. □

Carolyn Said is senior news editor/GA at MacWEEK. She welcomes feedback at carolyn_said@macweek.ziff.com.

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DataViz translates HTML

Kit can convert pages from Web

By James Staten

Internet surfers can now save their favorite World-Wide Web pages and then edit them with any word processor thanks to the latest conversion tool from DataViz Inc.

The company this week will ship in its collections of file translators the Internet Translator Kit, a new tool that turns Hypertext Markup Language (HTML) pages into word processing documents. The software preserves forms, tables and links and converts embedded graphics into PICT files.

DataViz said that after an HTML file is saved from within the user's Web browser, the translator can retrieve a graphical image by polling the browser's cache file, if it caches visited pages, or it initiates a connection to the Internet to retrieve the file.

All images are converted to PICT format unless the image is to be viewed by a Windows application, in which case the appropriate Intel-standard file format will be chosen.

The company said all formatting from the original Web page is maintained, including centering and image position; background patterns are not supported. All hypertext links are maintained and placed in the word processor file as endnotes or footnotes.

DataViz said it is working on a reverse translator that will allow users to save a word processing document as an HTML page while preserving formatting and image placement.

File Edit View Insert Format Tools Table Window
Welcome to Netscape (Word 6)
WELCOME TO NETSCAPE
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DataViz's Internet Translation Kit lets users convert HTML pages into word processing documents maintaining the formatting, images and hypertext links.

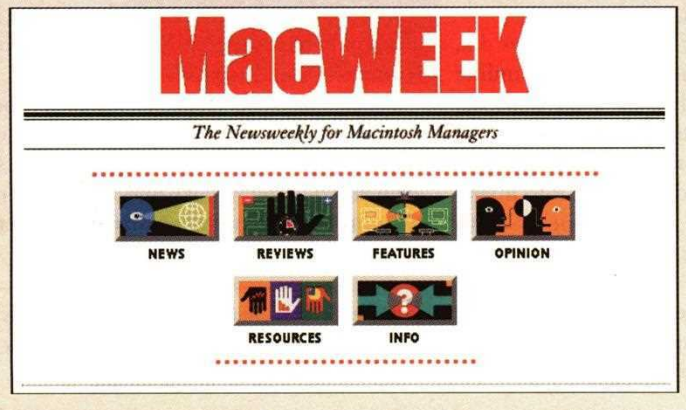
The Internet translator is not sold as a stand-alone product but as part of Version 8.0i of the $109 MacLinkPlus/Easy Open Translators, $149 Translators Pro and $199 MacLinkPlus/PC Connect. Users of Version 8.0 suites can upgrade for $20 as can those who have purchased the tool within the past 90 days; the upgrade from previous versions is $39.95.

DataViz also released Version 3.0 of Conversion Plus for Windows, its cross-platform floppy disk mounter and translation suite. The update adds new translators for graphics files in TIFF, JPEG, GIF (Graphic Interchange Format), BMP (Windows Bitmap), PCX or EPS formats. It also supports popular integrated applications, such as Microsoft Corp.'s Works 4.0 for the Mac, Claris Corp.'s ClarisWorks 2.0 and 3.0, and Novell Inc.'s WordPerfect Works 2.0 for Windows. Translators are also included for WordPerfect 6.1, Borland International Inc.'s Quattro Pro 5.0 and 6.0, and Lotus Development Corp.'s 1-2-3 versions 4.0 and 5.0. The company also added a preview feature that lets users quickly view a file before conversion and offers detailed tips.

Conversion Plus costs $149; upgrades are $39.95.

DataViz Inc. of Trumbull, Conn., is at (203) 268-0030 or (800) 733-0030; fax (203) 268-4345. □

MACWEEK'S NEW LOOK ON THE WEB



The redesign of MacWEEK's home page on the World-Wide Web premiered last week at http://www.zdnet.com/~macweek/ with exclusive stories not found in the print edition.

D2 to acquire La Cie, add Joule to crown

By David Morgenstern

A longtime player in the Mac storage market, La Cie Ltd. this week is expected to be scooped up by a major European drive vendor.

D2 électronique, based in Paris, will buy Beaverton, Ore.-based La Cie Ltd., a Quantum company, for about $12 million, sources said. The deal will include La Cie's continued manufacturing of Apple-labeled hard drives (see MacWEEK, May 2, 1994, Page 3).

While probably unfamiliar to users in North and South America, D2 is one of the major Mac storage vendors in Europe, with projected 1995 revenues of about $80 million. It has offices in seven countries as well as distributors in the Middle East and Africa.

Founded in 1987, La Cie offers lines of storage and scanner peripherals. Over the past year, the company has focused its marketing efforts on the Joule modular desktop-storage system, but with limited success, analysts said. La Cie recently said that this summer it will expand its Tsunami line of hard drives, which use a traditional enclosure.

Storage vendors familiar with the European market said that while the buyout gives D2 access to new U.S. markets, it may also want the Joule technology. They said that since most drives in Europe are purchased in the distribution channel instead of mail order, D2 could take advantage of the Joule proprietary design to hold its customer base. □

PopupFolder 2.0.1 gives users control of menus' appearance

By Robert Hess

This week a new version of Inline Software's Finder enhancement will pop up on users' screens, with a range of new features intended to speed access to folders and files.

The $79 PopupFolder 2.0.1 turns the Finder's icon for a folder into a pop-up menu of its contents., which is often faster than double-clicking through successive icons.

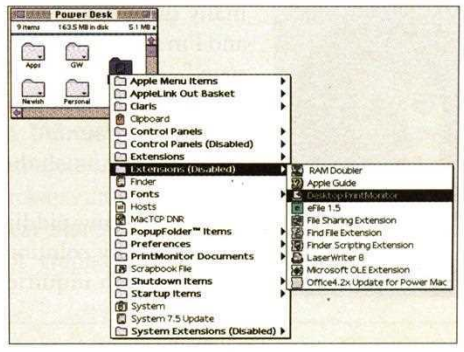
Version 2.0.1 adds control over the appearance of menus, whose items may be sorted alphabetically; by type, label or date; or in whatever method the Finder uses to list the folder's normal windows. Icons may also be displayed next to listed items.

A PopupFolder Menu in the menu bar and open and save dialog boxes provides quick access to the user's frequently used items. The new version adds the ability to move icons to items in the Apple menu by dragging.

A new menu-selection feature makes it possible to simply pass the mouse over the menu bar or require one click to pull down its menus. Inline has also overcome the limit of five levels in hierarchical menus; PopupFolder shows up to 16 levels.

Owners of previous versions can upgrade for $29.

Inline Software, a division of Focus Enhancements Inc., of Woburn, Mass., can be reached at (617) 935-1515 or (800) 453-7671; fax (617) 938-8353. □



Version 2.0.1 of PopupFolder shows icons in its menus and can be set to sort items by the Finder's corresponding window view.

Radius clone due July 24

By Andrew Gore

On July 24, Radius Inc. will announce and start shipping its first "mainstream" Mac clone, an 8100/110 knockoff that sources said will allow dealers more flexibility in configuring systems than its Apple-branded cousin.

Just like the 8100/110, the latest Radius clone will be based on a 110-MHz PowerPC 601, have three NuBus slots and come with on-board video, sources said. It will ship with a 2-Gbyte hard drive and 16 Mbytes of RAM but, unlike either Apple's box or Radius' higher-end clones, will not include a high-performance display card.

The new clone will be distributed exclusively through Ingram Micro Inc. of Santa Ana, Calif., and will be the first Mac clone to be manufactured by Armonk, N.Y.-based IBM Corp.; Radius and IBM announced the manufacturing deal last week.

In addition to giving dealers more options when configuring systems, sources said, the Radius clone will cost about 10 percent less than the 8100/110, which sells for about $5,400 with a 2-Gbyte hard drive, 16 Mbytes of RAM, an Apple High-Performance Video card and a CD-ROM drive. □

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HP's high-yield inkjet

Black and white soars on new color DeskJet

Hewlett-Packard said the cost per page of black-and-white text provided by its new DeskJet 1600CM is 1.5 to 3 cents, similar to that of laser printers.

By David Morgenstern

Hewlett-Packard Co. last week released its HP DeskJet 1600CM, a new high-speed 600-dpi network PostScript printer with a difference: It's a color inkjet.

The $2,479 1600CM joins HP's other color inkjet and laser printers for networks: the $1,999 HP DeskJet 1200C/PS and $8,500 Color LaserJet. HP said it expects a street price of less than $2,000 for the new entry.

"It's a hell of a printer," said Charles LeCompte, editor of The Hard Copy Observer in Newton Highlands, Mass. "The 1600 is tough on color lasers; it gives office-quality black-and-white [pages], high speeds, and decent color at one-third the price."

The 1600CM uses the same Intel RISC processor as the company's LaserJet 4 Plus laser printer and delivers black-and-white output at up to 8 pages per minute when printing in normal mode; an EconoFast mode prints monochrome at 9 ppm. It has color print speeds of 2 and 4 ppm for normal and fast modes, respectively, HP said.

The printer has a resolution of 600 dpi for black and white and 300 dpi for color. It uses four separate CMYK ink cartridges; HP said users can expect an average cost per page of 42 cents for newsletter and $1.67 for graphics-loaded pages.

The printer comes standard with 4 Mbytes of RAM that can be expanded to 70 Mbytes. It incorporates HP's ColorSmart, edge-sharpening and memory-enhancement technologies and switches automatically between PostScript Level 2 and HP PCL 5.

The 1600CM includes LocalTalk, Ethernet and Bi-Tronics parallel interfaces. It ships with a 180-sheet input tray; a 500-sheet tray costs $379.

HP also released the $1,699 DeskJet 1600C, a parallel-interface model without PostScript and networking support.

Hewlett-Packard Co.'s Direct Marketing Organization of Santa Clara, Calif., is at (800) 752-0900; http://www. hp.com. □

XLR-8 pushes CPU speed to 150 MHz

By James Staten

Pushing processor performance to the limit or even beyond, XLR-8 last week shipped an accelerator for the new Power Mac 9500 models that jacks up the clock-rates by as much as 25 percent.

The $249 Warp Factor 150MHz attaches to the PowerPC oscillator chip on the 9500's CPU daughtercard and boosts the 120-MHz 604 processor to 150 MHz and the 132-MHz version up to 160 MHz, XLR-8 said.

The add-on does not permanently modify the 9500, and users can set the accelerator's speed from 128 MHz to 160 MHz.

Industry experts have criticized "clock-chipping" accelerators, such as the Warp Factor 150MHz, for exceeding the heat-dissipation capabilities of the CPU and pushing speeds beyond manufacturer tolerances, thus shortening its life. XLR-8 said the 9500's CPU daughtercard was designed by Apple to accommodate a 150-MHz processor, so no additional cooling is required with the Warp Factor 150MHz .

XLR-8 said it is developing a cooling system for the 9500's CPU daughtercard that will allow speeds up to 175 MHz. The faster cards are expected to ship later this year.

Addressing the second concern, XLR-8 said the 604 chip has been engineered for speeds up to 160 MHz, and any decrease in the life of a processor caused by its accelerator is negligible when compared to the much shorter average life cycle of a personal computer.

The company offers a lifetime warranty on the Warp Factor 150MHz but said it will not replace a PowerPC processor in the event of a failure. Its warranty also does not cover memory failures caused by acceleration.

Apple stated last week that some memory may lock up at processor speeds above 120 MHz (see MacWEEK, July 10, Page 4). Apple also said the use of clock-chipping accelerators, such as the Warp Factor 150MHz, will void a Power Mac warranty.

XLR-8 of Waco, Texas, is at (817) 772-0286; fax (817) 772-1256; xlr84u@aol.com. □

Elektroson shifts to Gear 3.0 with support for hybrid discs

By David Morgenstern

Elektroson Inc. next week will tune up CD recording with the release of Gear 3.0, an update to its cross-platform CD-Recordable software. In addition to an improved user interface, the upgrade expands support for new CD standards and jukebox recorders.

Both the $199 Gear 3.0 and $499 Gear Multimedia/Multiformat 3.0 versions add support for hybrid-format discs that can share files compatible with both Hierarchical File System and ISO 9660 standards. The shared hybrid format lets developers pack more files on a disc and create a single product for multiple platforms. The update also handles the new CD Plus format, which combines audio and multimedia data.

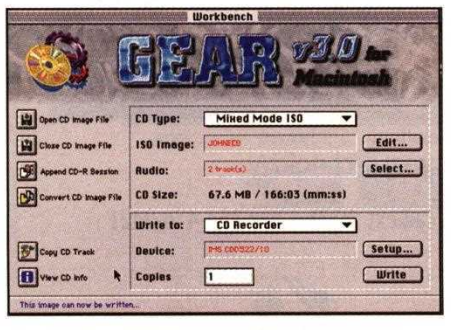
Elektroson said Version 3.0 works with magneto-optical drives with an average access time of less than 12 milliseconds. Unlike previous versions, Gear is now compatible with SCSI partitions created by most third-party drivers, the company said.

The software uses a new engine that Elektroson said speeds the layout of disc images and boosts data transfer rates for quadruple- and sextuple-speed recorders.

In addition to support for new recorder mechanisms, Gear 3.0 works with Kodak and Pioneer CD jukeboxes.

Gear upgrades cost $59 and $99 for the standard and multimedia versions, respectively.

Elektroson Inc. of Bala Cynwyd, Pa., can be reached at (610) 617-0850; fax (610) 617-0856; sales@elektroson.com. □



Version 3.0 of Elektroson's Gear CD-R authoring software combines a tool palette and command buttons in a Workbench interface.

Brighter, lighter projectors ship

By James Staten

Although no rival to the summer sun, new projectors released in June from Boxlight Corp. and Proxima Corp. brightened the presentation market with models that display images up to 25 feet diagonally.

The $8,999 Boxlight 3080 uses a 400-watt metal halide lamp and three active-matrix polysilicon LCDs to display 24-bit images at a 640-by-480-pixel resolution from up to 35 feet away. It has a 100-1 contrast ratio and can support up to four simultaneously connected video sources; two computer and two video.

Boxlight's 16.9-pound projector features two internal stereo speakers as well as connections for external audio devices.

Proxima shipped three LCD-based projectors capable of displaying 24-bit images at a resolution of 640 by 480 pixels with a 100-to-1 contrast ratio.

The Desktop Projector 2900, which is priced at $8,995, uses a 400-watt metal-halide lamp to generate 500 lumens. The $6,995 Desktop Projector 2710 and $7,495 Desktop Projector 2810 use 410-watt halogen lamps to output 300 lumens.

The slim units use a folded optical design with angled LCD panels that allow the lens assembly to be stored within the body of the projector. Proxima said the devices increase efficiency by focusing all available light through the aperture of the LCD panel.

Proxima's Desktop Projector 2900 outputs 500 lumens and can display 24-bit images up to 25 feet diagonally. It features a movable mirror for easy positioning of the projected image.

Proxima said the projectors use proprietary color-enhancement technology to improve convergence and color fidelity. They also feature a movable mirror to help users position projected images.

Each unit weighs just over 20 pounds and has an audio output jack as well as stereo speakers that fold outward to face the audience. Two simultaneous video input ports are also provided; the 2710 supports only computer signals, and the 2810 and 2900 support computer as well as NTSC, PAL (European), VHS or Super VHS signals. The 2710 can be upgraded to the 2810 for $695.

The projectors come with Proxima's Cyclops cartridge, which can remotely control a connected Mac with either an included laser wand or a $295 cordless laser pointer.

Boxlight Corp. of Poulsbo, Wash., is at (360) 779-7901 or (800) 762-5757; fax (360) 779-4955.

Proxima Corp. of San Diego is at (619) 457-5500 or (800) 447-7694; fax (619) 457-9647. □

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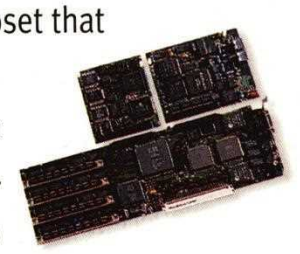

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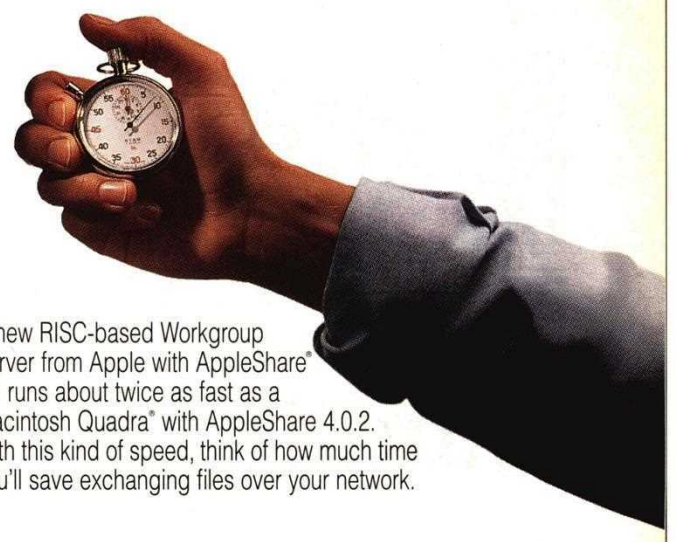
–Vince DiPaola



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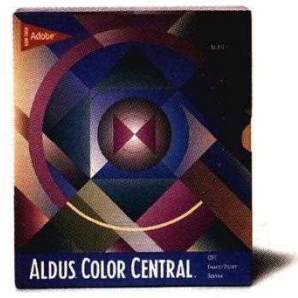

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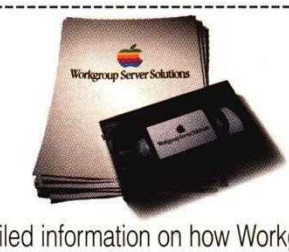

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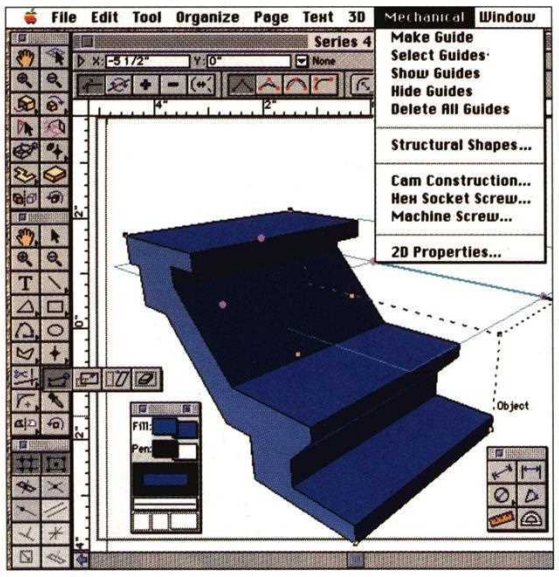
MiniCad 6 to ship in fall

By Cate C. Corcoran

Graphsoft Inc. is planning a major upgrade to MiniCad and bringing the currently Mac-only application cross-platform.

Scheduled for a Macworld Boston announcement in August and a September ship, the $795 MiniCad 6 will include an integrated drafting tool kit, off-screen redraw, QuickDraw 3D metafile format support and a slew of other new and updated features.

The new version will integrate the MiniCad Design and Drafting tool kit, industry-specific tools, symbols, commands, worksheets, hatches, and examples grouped for the AEC (architecture, engineering and construction), mechanical engineering, civil engineering and landscape design segments of the CAD market.



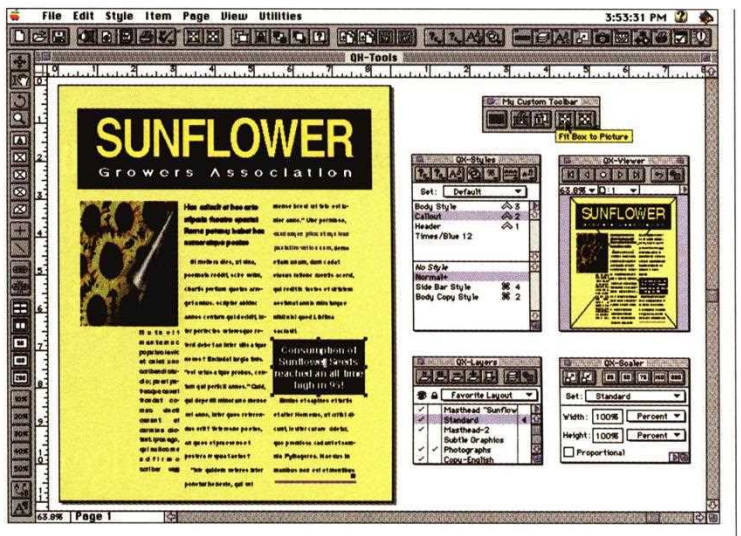
MiniCad 6, slated to ship in September, will include a Design and Drafting tool kit that allows users to select from tool sets for architecture, mechanical engineering, landscape design and other design specialties.

Version 6 will add an Eyedropper tool that will let users grab attributes from an object and place them on another, and a Number Stamp tool that will assign numbers to objects for creating materials schedules.

Users of MiniCad 6 will have greater control over the look of their drawings. Users will be able to create custom arrowheads for lines and modify selections in the color palette. The hatching dialog will offer a wider array of options for designing hatch patterns, the company said.

Off-screen redrawing will speed

See MiniCad, Page 12



QX-Tools, a forthcoming suite of QuarkXTensions from Extensis, will add configurable tool bars and nine other new functions to QuarkXPress.

New QX-Tools suite to offer 10 XTensions

By Cate C. Corcoran

Adobe Photoshop plug-ins, daily tips, layers and a configurable tool bar can be added to QuarkXPress with a new suite of QuarkXTensions. Building on the success of its suite of Adobe PageMaker Plug-ins, Extensis Corp. in August will offer a package of 10 XTensions for QuarkXPress, the page-layout application from Denver-based Quark Inc. QX-Tools is slated to cost $149 retail or $99 direct from the company.

- **QX-Bars** will add tool bars with hundreds of XPress commands and QX-Tools to the XPress interface. Users can configure the bars to display frequently used tools, launch XTensions and open files.
- **QX-Viewer,** a floating palette, will let users click through

See Extensis, Page 12

FOCUS ON

DIGITAL VIDEO

PCI deals new deck of video cards

By Steve Rosenthal

The advent of the PCI bus should provide breakthroughs in price, performance and cross-platform compatibility for digital video, an area where throughput is critical.

Starting this fall, video board makers from the Mac and Intel-standard PC camps plan to deliver a wide selection of digital video boards for the Power Mac 9500 and other Mac models designed around the PCI bus.

Faster streaming

According to tests by Apple, in real-world transfer the NuBus-based 840AV writes at 30 Mbytes per second and reads at 20 Mbytes per second, while the new PCI-based Power Mac 9500 writes at 94 Mbytes per second and reads at 52 Mbytes per second.

PCI throughput may help Intelligent Resources Integrated Systems Inc. expand its current single-card VideoExplorer system to a new multicard architecture, said Dave Spindle, vice president of marketing for the Arlington Heights, Ill., company.

Because PCI allows throughput fast enough to deliver even uncompressed digital video from card to card, Spindle said, a video signal captured on the company's forthcoming MediaExplorer PCI card can be sent to third-party cards for processing or to a disk array without losing any details. With Intelligent Resources' MediaBahn connector going from card to card, "you'll be

See Focus On, Page 12

How PCI vitalizes video

PCI FEATURE	BENEFIT FOR DIGITAL VIDEO
Faster bus speed	Better image quality and/or faster frame rates
Multiple PCI bridge chips	Multiple data streams; easier switching and special effects
Common architecture across platforms	Lower cost, greater choice of products
Broad-based industry standards committee	Easier mix and match between different brands of cards

For a look at today's NuBus video systems, see Solutions, Page 37.

Virtus to send 3-D to the Web

By Donna Raskin

Hoping to bring 3-D worlds to cyberspace, Virtus Corp. in early August will begin to incorporate Virtual Reality Modeling Language into its software.

Support for Virtual Reality Modeling Language, or VRML, an emerging standard for displaying 3-D graphics on the World-Wide Web, will enable users of Virtus applications to publish 3-D sites on the Web, the company said.

The $35 Virtus WalkThrough Special Edition/VRML will include a CD that contains an older, non-Pro version of WalkThrough with VRML export capabilities as well as a book about VRML.

The company in October will ship free Mac and Windows VRML-enabled Web browsers.

Virtus plans to ship full upgrades with VRML features for both WalkThrough Pro and Virtus VR by the end of the year.

"We're moving in the direction of on-line shopping and interactive games," said David Smith, president and CEO of Virtus, "and users are going to need a lot more than Netscape [Navigator] to get around."

Other Mac applications slated to support VRML include Strata Inc.'s StudioPro, which will have VRML export capabilities, and Template Graphics Software Inc.'s WebSpace, a VRML browser.

Virtus Corp. of Cary, N.C., is at (919) 467-9700 or (800) 847-8871; fax (919) 460-4530. □

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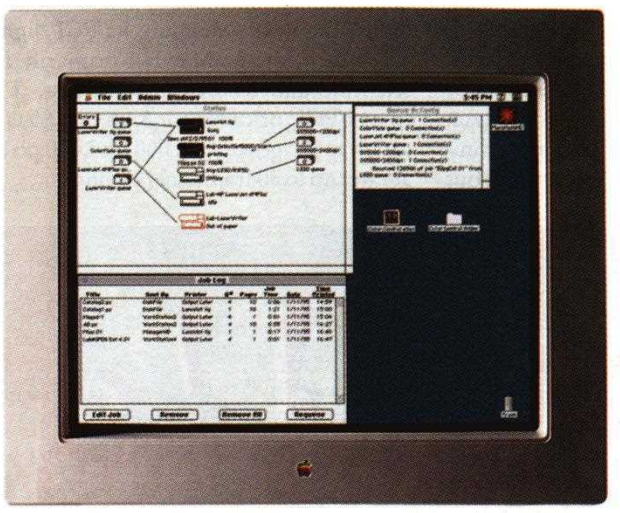

Adobe Color Central. *This program creates low-res "samples" from high-res images, so your people can manipulate and print them in seconds, and then move on to the next job.*

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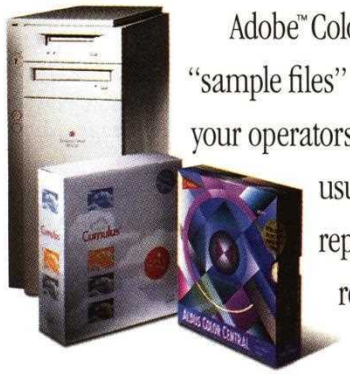

Adobe™ Color Central™ automatically creates low-resolution "sample files" for placement in page layouts. This enables your operators to print in, say, 20 seconds (as opposed to the usual 20 minutes), as Color Central automatically replaces the low-resolution image with its corresponding high-resolution image.

And Canto Cumulus stores and catalogues all of your images, and lets you conduct a search based on over 20 variables, such as image name and type. No more hunting through SyQuest cartridges, hard disks, CDs or opticals. Plus, it accepts all file types.

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FOCUS ON

From Page 10

able to process four or five streams of data without going to some type of [separate] video switcher," he said.

Similarly, Precision Digital Images Corp. of Redmond, Wash., found that PCI made a significant difference for its products. According to Richard Clark, PDI chief technical officer, by switching to PCI from NuBus and then optimizing the design for the new configuration, his company was able to double the frame rate of its high-resolution video digitizers. "Historically, new bandwidth creates new applications," he said.

PDI is already shipping its PCI digital video card for the Mac but primarily for scientific and medical applications. The Imaxx/PCI, priced from $3,000 to $5,000, captures images up to 2,000 by 2,000 pixels at rates up to 30 frames per second.

Patrick Rafter, "minister of information" for Data Translation Inc. of Marlboro, Mass., said that PCI's higher bandwidth will allow developers to provide higher-quality video and faster rendering. In terms of his company's plans, Rafter said, "Data Translation has announced the intention to support PCI in the near future." The company currently uses a NuBus board set on the Mac but already has developed a single-board PCI card for use on PCs.

A two-tiered transition

Some companies are cautioning users not to expect an immediate change in current applications. "If you can do real-time video at full rate on a NuBus machine, the speed of the PCI bus doesn't make that real-time video any more real time," said Gregg Millar, vice president of research at Radius Inc. in Sunnyvale, Calif.

Radius is "committed to the PCI bus,"

See Focus On, next page

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Extensis

From Page 10

page thumbnails and zoom to 900 percent.

- **QX-Styles,** a floating palette containing both character-level styles and paragraph styles, will overcome XPress' limitation of paragraph-based style sheets. The XTension will let users save groups of styles to be used for particular jobs or clients.
- **QX-Layers** will let users designate layers and assign objects to layers. Users will be able to hide or display layers, so they can easily produce several versions of a document by creating alternative layers with different text or images on them.
- **QX-Scaler** will list objects in a document and let users choose multiple objects to rescale simultaneously.
- **QX-Filters** will let XPress join the ranks of applications that run Photoshop plug-ins. QX-Tools will ship with 12 filters and let users add and apply any Photoshop-compatible filters to images in XPress.
- **QX-Dingbats,** a floating palette, will display all the characters of a font a user chooses. Clicking on a character will place it after the cursor in the active text window.
- **QX-Manager** will list XTensions and let users turn them on and off, as well as save sets of XTensions.
- **QX-Tips & Tricks** will give a daily tip by XPress expert and author David Blatner.
- **QX-Print** will expand the XPress Print dialog to let users print discontinuous page ranges, print spot colors as process colors or save a selected region in EPS format.

Extensis Corp. of Portland, Ore., is at (503) 274-2020 or (800) 796-9798; fax (503) 274-0530; extensis@aol.com. □

MiniCad

From Page 10

general use of the application, the company said, and an Autosave function will prevent data-loss mishaps. Users will be able to export 3-D objects in Apple's QuickDraw 3D metafile format. More than 30 new routines in MiniCad's scripting language, MiniPascal, will be included.

Graphsoft said it is planning MiniCad 6 for Windows 95, the first Windows release of the program, late in 1995. Beta tester Robert Anderson, an owner of Matrix Design, an architectural firm in Austin, Texas, said: "We have lots of clients who are [Intel] PC-standard [and] are eager to get MiniCad's features. For us, the cross-platform capability means we are going to get an explosion of growth in clients."

Graphsoft Inc. of Columbia, Md., can be reached at (410) 290-5114; fax (410) 290-8050; marketing@graphsoft.com. □

Focus On

From previous page

according to Pat Burns, vice president of the digital video group. However, he said, the transition will be a two-step process. "The first products will be similar to our NuBus products today," he said. "The second generation will show advancements in speed and video quality." Radius has not yet determined its PCI product lineup and ship dates.

The larger PCI market means prices will come down, said Data Translation's Rafter, although probably not as much for broadcast-quality video products as for other display cards.

Furthermore, said Daniel Coyle, media relations coordinator for ATI Technologies Inc. of Thornhill, Ontario, the price differential between PC and Mac video cards should decrease. System architecture and software will still distinguish Macs and PCs, he said, but PC and Mac users will increasingly find "comparable products with comparable technology at comparable prices" at the video hardware level.

Lining up for PCI

Many developers said their PCI cards for the Mac are at least a few months away. "The 9500 will be an important machine for the video market," said Louis Doctor, president of Truevision in Santa Clara, Calif. The PC version of the company's flagship Targa 2000 is now shipping in a PCI configuration, with the Mac PCI system scheduled for fall.

miro Computer Products Inc. President Bob Butchko said the Palo Alto, Calif., company plans to bring out five new PCI video cards this year, including a Mac version of its Micromotion digital editing system with JPEG compression.

The new version of Media Suite Pro, due this month from Avid Technology Inc. of Tewksbury, Mass., is based on NuBus, said product manager Carmen Bal. But, she added, "all our product development is moving to PCI," with shipments starting this fall.

Matrox Graphics Inc. of Montreal is working on adapting its MGA Millennium frame-buffer-style accelerated graphics cards to the Mac while it considers Mac PCI versions of its editing products, according to product manager Caroline De Bie.

For users who are interested in storing or distributing digital video, Wired Inc. of Mountain View, Calif., plans to ship in September a $2,499 PCI-based video and audio capture and compression board that provides MPEG and MPEG-2 compression with a new, lower-cost MPEG encoding chip from IBM Corp.

According to Wired President Mark Bain, MPEG video on a PCI Mac, "looks smooth and runs well" at less than half the cost of previous designs.

Apple also plans to combine PCI and digital video in future machines, said David Limp, Power Mac product line manager. According to sources, the Power Mac 8500, due in August, will incorporate video I/O, a PCI connector optimized for digital video and a digital audio-video connector. The 7500, due the same month, will also sport some video features (see MacWEEK, May 29, Page 1). □

AT&T service to print on demand

By James Staten

AT&T Corp. envisions a day when documents can be sent electronically to any printer in the world. This month the Murray Hill, N.J., company announced a plan to make this a reality.

AT&T's Network Demand Printing Service is a worldwide network and infrastructure that allows a single production manager to automatically print a complex document at any number of remote sites. The manager specifies the finishing requirements for a job, such as the type of paper, bindings, tabs, cover stitching and the destination sites.

The network currently works with Xerox Corp.'s DocuTech Network Printers. Agfa-Gevaert Group, Eastman Kodak Co., Indigo N.V. and Scitex Corp. Ltd. have agreed to adapt their print technologies for the new AT&T network. Adobe Systems Inc. said it plans to license its PostScript and Acrobat technologies to the network.

The system is currently limited to black-and-white output, but AT&T said it plans to provide color, on-line document storage, and private and public directories of output sites next year. □

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Microsoft® Word 6.0.1.
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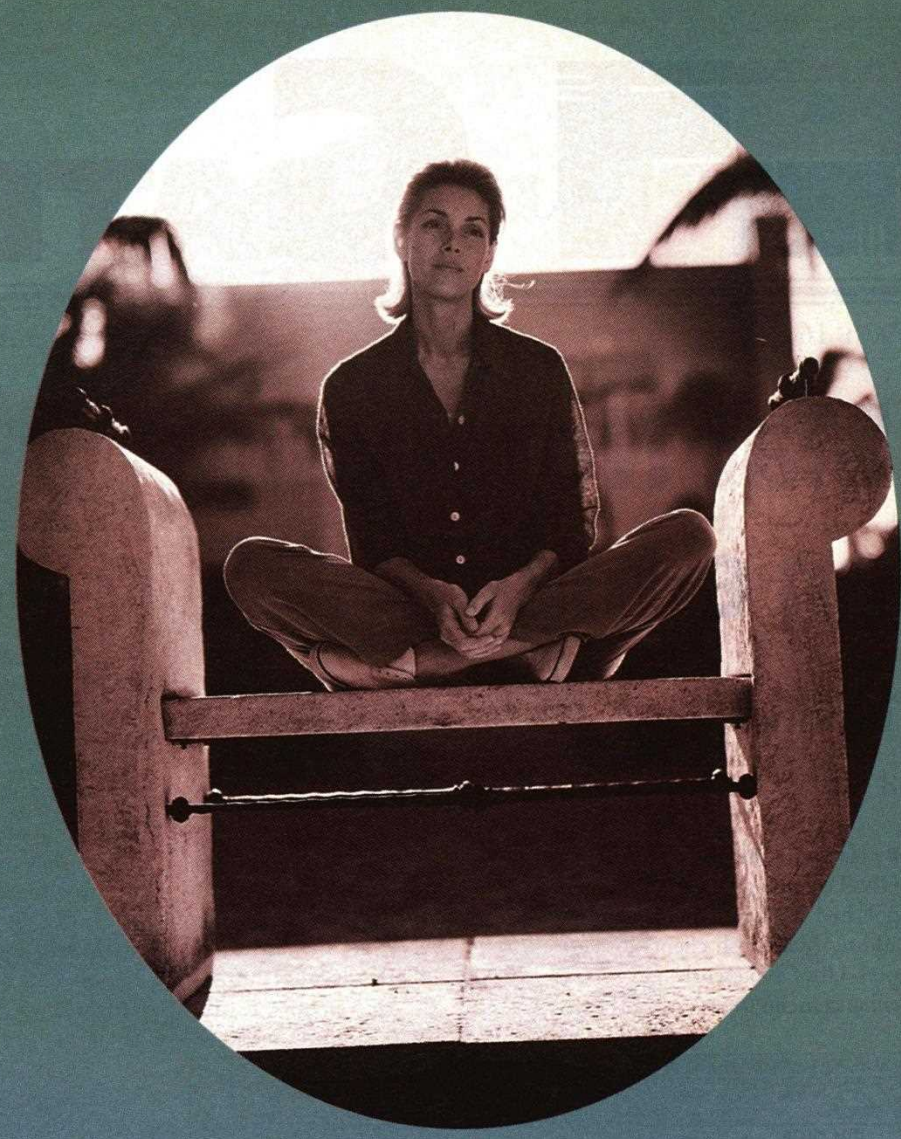
Is racing.
Your fingers
Are racing
To keep up
With your thoughts.



YOU WRITE

You begin
A new
Sentence with
A lowercase letter.
This mistake
Is corrected
Automatically.

YOU REVISE

Knowing there are
100 levels
Of Undo.
And 100 levels
Of Redo.
Just in case.

YOU WRITE

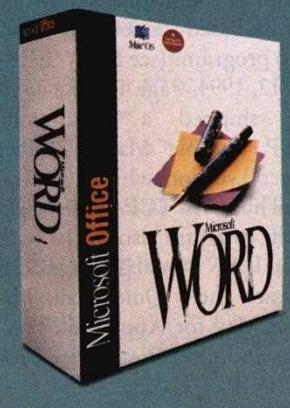
You begin a new
Sentence with
An abbreviation
You created.
It becomes
An entire phrase.
Automatically.

YOU REVISE

In
Print preview
You change
Margins
Words
Typefaces.

YOU WRITE

Until you have finished.
You click AutoFormat.
And the block of words
Can become
A letter.
A proposal.
A story.
Automatically.
You write. Because you can.



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WHERE DO YOU WANT TO GO TODAY?™

Mac Notework on e-mail track

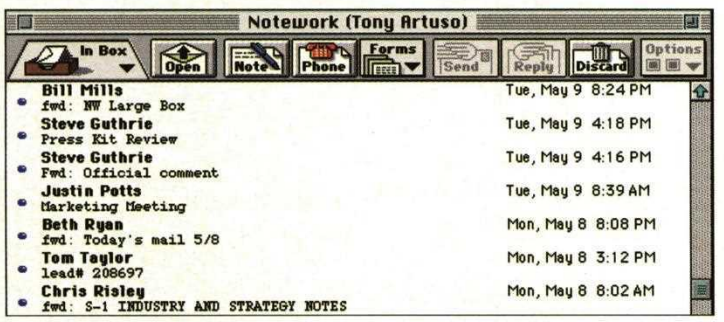
DaVinci draws a server upgrade

By Nathalie Welch

ON Technology Corp. this week polished its two e-mail systems, adding Macintosh clients to Version 4.0 of Notework and server enhancements to DaVinci eMAIL.

Notework provides e-mail and telephone-messaging services for Windows and DOS users on Novell NetWare LANs. In addition to new clients for Mac, Windows NT and Windows under OS/2 Warp, Version 4.0 supports up to 1,200 addresses per server (to a LANwide maximum of 50,000) and an unlimited number

See Notework, Page 18



ON Technology expects to ship this week the first Macintosh client to its Notework system, which it called "the best little e-mail for Novell NetWare LANs."

BlueStreak is 10/100BASE T for NuBus, PCI

By Clifford Colby

Dayna Communications Inc. last week announced the details of its new BlueStreak Fast Ethernet product family.

The company expects to offer in August dual-speed 10/100BASE T cards for NuBus and PCI Macs. The NuBus card, which Dayna said should have a street price of about $325, will use Standard Microsystems Corp. chips. Dayna's PCI card will use chips from Digital Equipment Corp. and have an estimated street price of $225. Both cards will use National Semiconductor Corp.'s NWay autonegotiation technology and will in the future be able to operate in full-duplex mode.

Dayna also intends to ship in August a 12-port 100BASE T repeating hub with an estimated street price of $1,799. In November, it plans to offer a two-port

See Dayna, Page 18

Asanté deals stack of 100-Mbps hubs

By Clifford Colby

Asanté Technologies Inc. this week plans to ship the Asanté-FAST 100 Hub, which it said is the first stackable 100BASE T device.

Managers will be able to combine five of the 12-port hubs; each one costs $1,995. The 100BASE T standard allows for only two repeaters in a LAN segment, and each stack of hubs is treated as one repeater. Thus, two connected stacks will supply up to 118 free ports, which Asanté claimed is the top port count currently possible on a Fast Ethernet LAN segment.

The company said it plans to release later this year a bridge-router box and is considering a dual-speed Fast Ethernet NuBus card to join its $269 10/100BASE T PCI card.

The recently released PCI card implements National Semiconductor Corp.'s NWay scheme for automatically negotiating communications between nodes at either 10 Mbps or 100 Mbps and half or full duplex. The Asanté-FAST 100 Hub is similarly capable of full-duplex links.

"The price is very attractive," said Trudy Barker, a director and principal analyst at Dataquest Inc. of San Jose, Calif. "I think Asanté is offering the right product at the right time; they are moving very quickly to capitalize on the coming 100-Mbps boom."

Asanté Technologies Inc. of San Jose, Calif., is at (408) 435-8388 or (800) 662-9686; fax (408) 432-7511; sales@asante.com. □

ListStar ships; Apple nets MailShare

By Nathalie Welch

The Macintosh gained muscle as an Internet mail server last month when StarNine Technologies Inc. shipped ListStar and Apple announced it had bought MailShare, a freeware Mac-based Internet mail server.

StarNine said it hopes ListStar will horn in on the market owned by Unix-based Listserv or Majordomo programs (see MacWEEK, Dec. 12, 1994, Page 1). The company shipped a stand-alone SMTP (Simple Mail Transfer Protocol) version, which acts as an e-mail host on a TCP/IP network. But the program also works with several LAN e-mail packages: CE Software Inc.'s QuickMail, Microsoft Mail for AppleTalk Networks and most Post Office Protocol (POP) 3 servers.

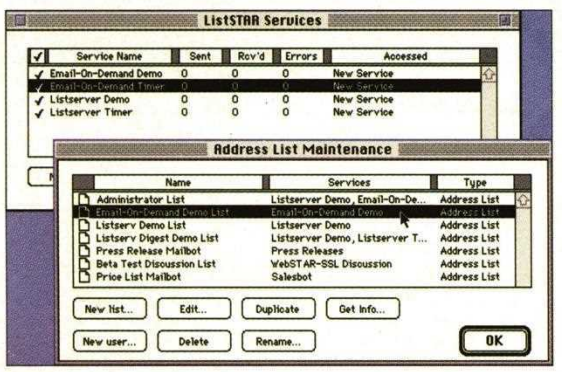
Administrators can configure rules for each mailing list that add and delete subscribers, forward mail, or compile digests of mail. ListStar's mail-on-demand component automatically forwards requested information to users as text with optional attachments.

ListStar for LAN mail is $199 through July 31, after which the price will be $295. The SMTP version is $349 until August, after which it will be $795.

In other news, Apple acquired MailShare, the popular POP and SMTP server (see MacWEEK, June 12, Page 16). Apple also said it has hired MailShare developer Glenn Anderson of Dunedin, New Zealand.

The company renamed the freeware Apple Internet Mail Server. About its planned commercial versions, Apple said only that it will boost features and provide technical support. The current version will remain free but unsupported.

StarNine Technologies Inc. of Berkeley, Calif., is at (510) 649-4949 or (800) 525-2580; fax (510) 548-0393; info@starnine.com. □



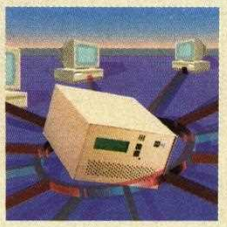
StarNine's Mac-based ListStar manages e-mail lists for group distribution and mail-on-demand systems over the Internet.

FOCUS ON INTEROPERABILITY

Alternative LANs push multimedia speed limits

By John Poultney

Because they need such high throughput, multimedia shops working with digital video and sound or high-resolution graphics often can't use a LAN like other companies do. While Fast Ethernet, Open Transport, PCI cards and Asynchronous Transfer Mode hold promise, two alternative products have for years yielded the necessary LAN speed for multimedia.



MediaNet from Sonic Solutions of Novato, Calif., and SCSI-Net from Transoft Corp. of Santa Barbara, Calif., are hardware-software combinations whose express purpose is giving access to shared hard disks at speeds comparable to local drive performance.

Real-world users report that MediaNet and SCSI-Net provide throughput of about 3.5 to 5 Mbytes per second. Transoft said upcoming Ultra SCSI and Fibre Channel Arbitrated Loop systems could reach 40 and 100 Mbytes per second, respectively.

The catch? These alternatives are expensive. For six-to-eight-node setups, either system requires an investment of at least $15,000 — about 10 times the cost of standard Ethernet.

SCSI-Net uses seven-port hubs connected to Macs via ATTO Technology Inc.'s NuBus or PCI SCSI-2 adapter cards; SCSI-Net II uses Fast SCSI-2, and SCSI-Net III uses

See Focus On, Page 18

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FOCUS ON
From Page 16

Fast and Wide SCSI-2. Up to 49 disk drives can be connected to the hubs, accessed by up to 36 users.

MediaNet, which handles up to 64 users, is based on NuBus cards connected to Fiber Distributed Data Interface hubs over copper or fiber-optic cabling. MediaNet cards can have SCSI ports for locally attached drives that are available to all. Unlike SCSI-Net, which uses standard Mac-formatted drives, MediaNet drives use a special format based on Sonic's Media Optimized File System (MOFS).

MediaNet's cards have on-board CPUs, RAM and a mini-OS to perform file translation and network transfers. MOFS drives may be of any capacity without requiring partitions, since MediaNet bypasses the Mac's 4-Gbyte partition limit. MediaNet allows multiple users to read and write data simultaneously on each drive, while SCSI-Net restricts write access to one user while enabling all users to read data anytime.

Despite cost and size limitations, MediaNet and SCSI-Net gain favorable reviews from their well-heeled users. Digital prepress operations at Inland Color Graphics in Corona, Calif., have accelerated markedly with SCSI-Net III, said Plant Manager Kevin Cooper.

"SCSI-Net gives us the capability of doubling, possibly tripling, the amount of work we can accomplish in a shift," he said.

Working mainly with Adobe Photoshop files from 80 to 120 Mbytes, each Inland user has both a SCSI-Net card and a standard Ethernet one. Drum-scanner output is saved directly to SCSI-Net-connected drives, which are also available to a Mac print server.

When a user prints a scanned image, the command travels over Ethernet, but the data doesn't move at all to reach the print server. The server transfers the data from SCSI-Net to Ethernet so it can reach the imagesetter, but pre-press users and their nonstandard networks are freed up immediately for more speedy work. □

Notework

From Page 16

of NetWare servers; earlier versions could handle up to 100 servers.

But there's a price to pay: ON's Notework 4.0 system pack for the Mac is $995, compared to $199 for DOS or Windows; licenses in lots of 10 users are $590.

ON's DaVinci eMAIL 3.2 eases e-mail administration via a new Mail Server option. Installed as a Message Handling Service gateway or stand-alone program, the server proxy can pick up mail and perform client-defined rules in the user's absence. It also lets administrators automatically empty a client's e-mail wastebasket.

Better integration with Novell Inc.'s NetWare Directory Services bases DaVinci's address books entirely within Novell's networkwide database. Other addressing improvements include a Recent Address book, which stores the addresses of the most recent recipients.

DaVinci eMAIL 3.2 for Mac is $595; a DOS and Windows system pack is $199. Client licenses start at $790 for a 10-user pack.

ON Technology Corp. of Cambridge, Mass., is at (617) 374-1400 or (800) 767-6683; fax (617) 374-1433; info@on.com. □

Dayna

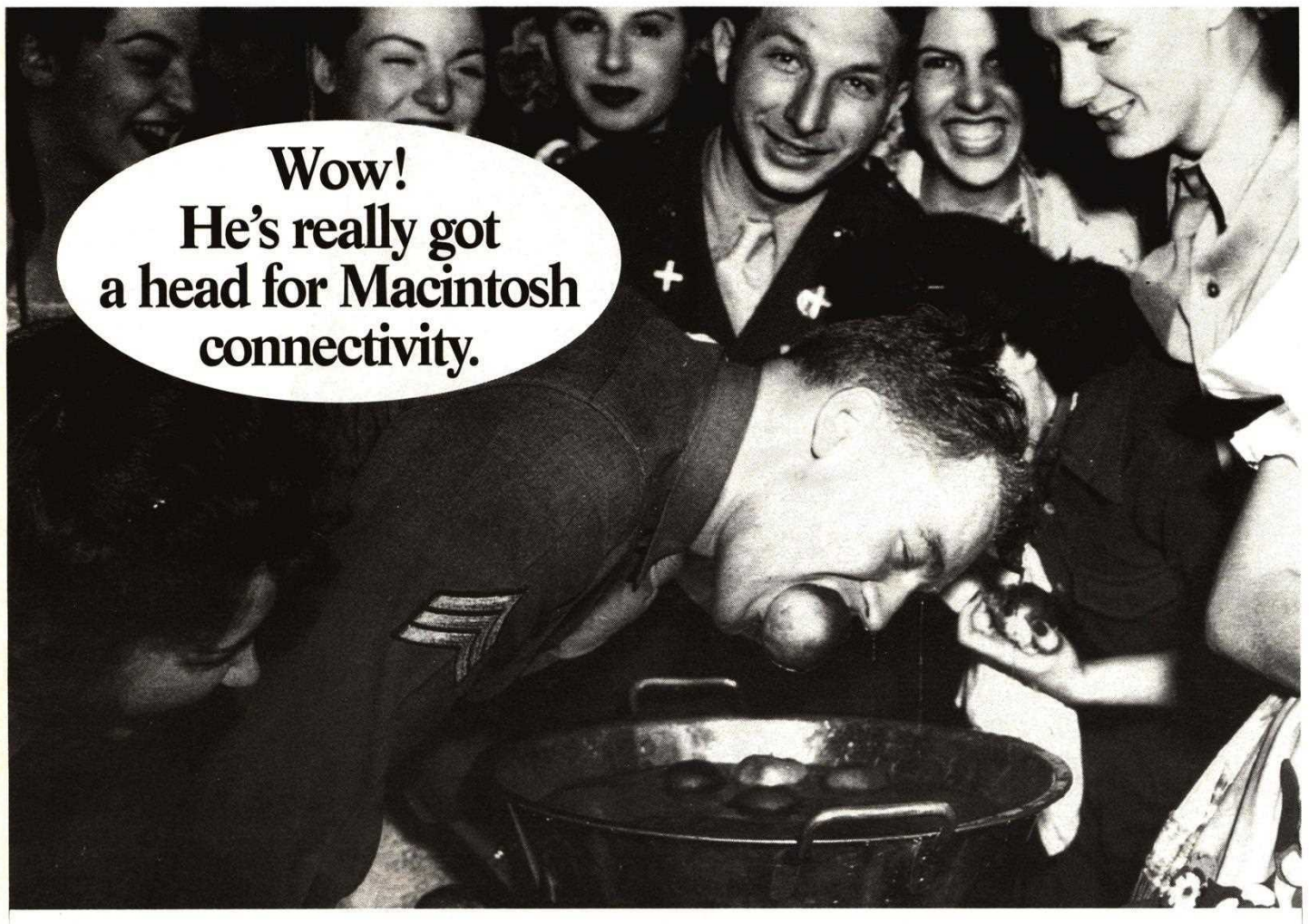
From Page 16

10/100BASE T bridge for connecting standard and Fast Ethernet LANs.

Like other companies creating 100-Mbps PCI cards, Dayna found limited benefits from Apple's new native networking architecture, Open Transport. Compared to current 10-Mbps NuBus cards, "We are not seeing any tremendous performance increases on our PCI card," said William Kilmer, Dayna product marketing manager.

Apple tuned the initial releases of Open Transport for 10-Mbps Ethernet but said it will optimize the software for faster networking speeds in Version 1.1, due by the end of 1995. Kilmer said Dayna is planning drivers for non-Mac CPUs. "But right now our focus is on the Mac platform," he said. Its Mac-only NuBus cards will provide competition for Farallon Computing Inc., the only other company to have announced a Fast Ethernet offering for the older bus.

Dayna Communications Inc. of Salt Lake City can be reached at (801) 269-7200 or (800) 531-0600; fax (801) 269-7363. □



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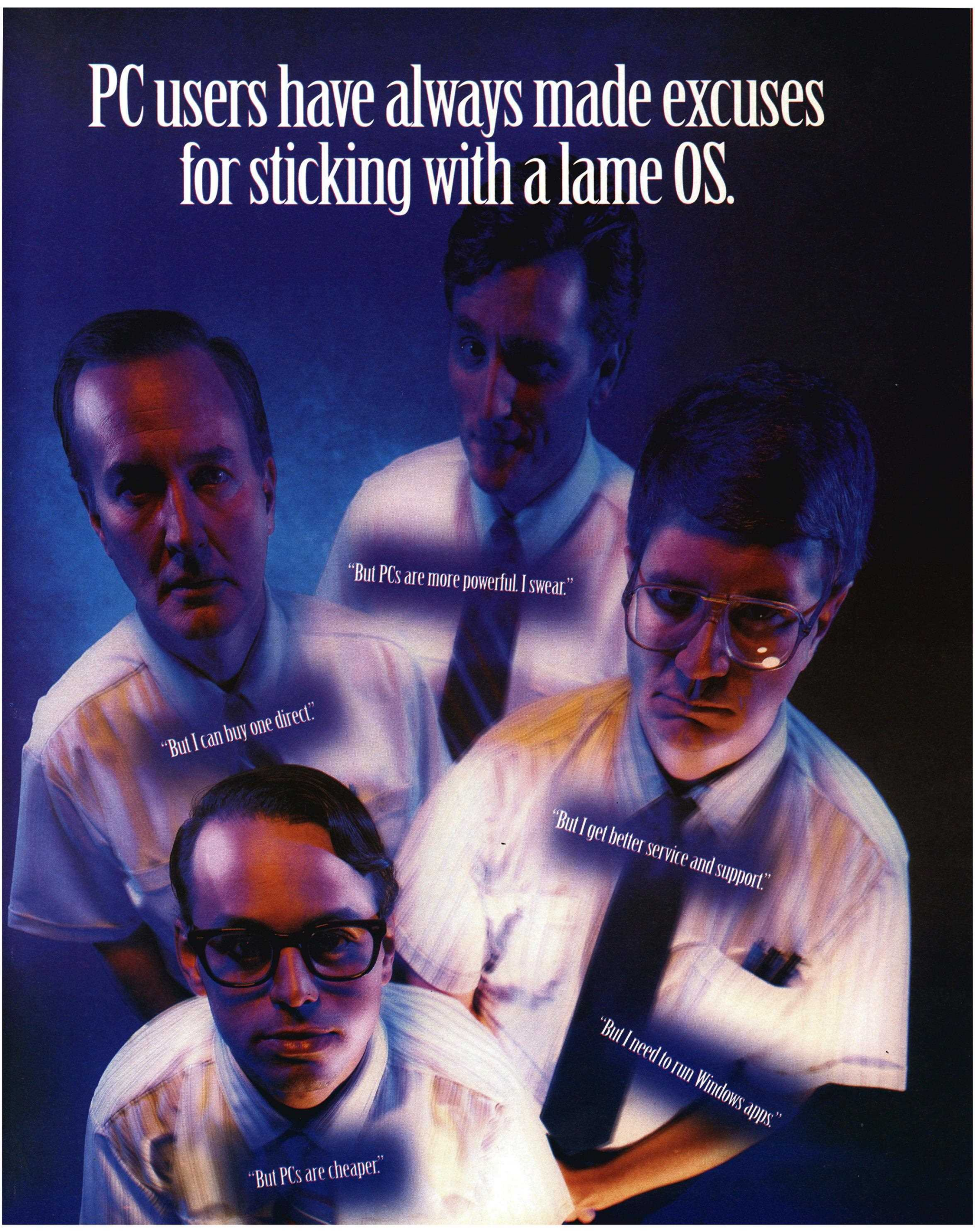
Pacer Products

PC users have always made excuses for sticking with a lame OS.


"But PCs are more powerful. I swear."
"But I can buy one direct."
"But I get better service and support."
"But I need to run Windows apps."
"But PCs are cheaper."

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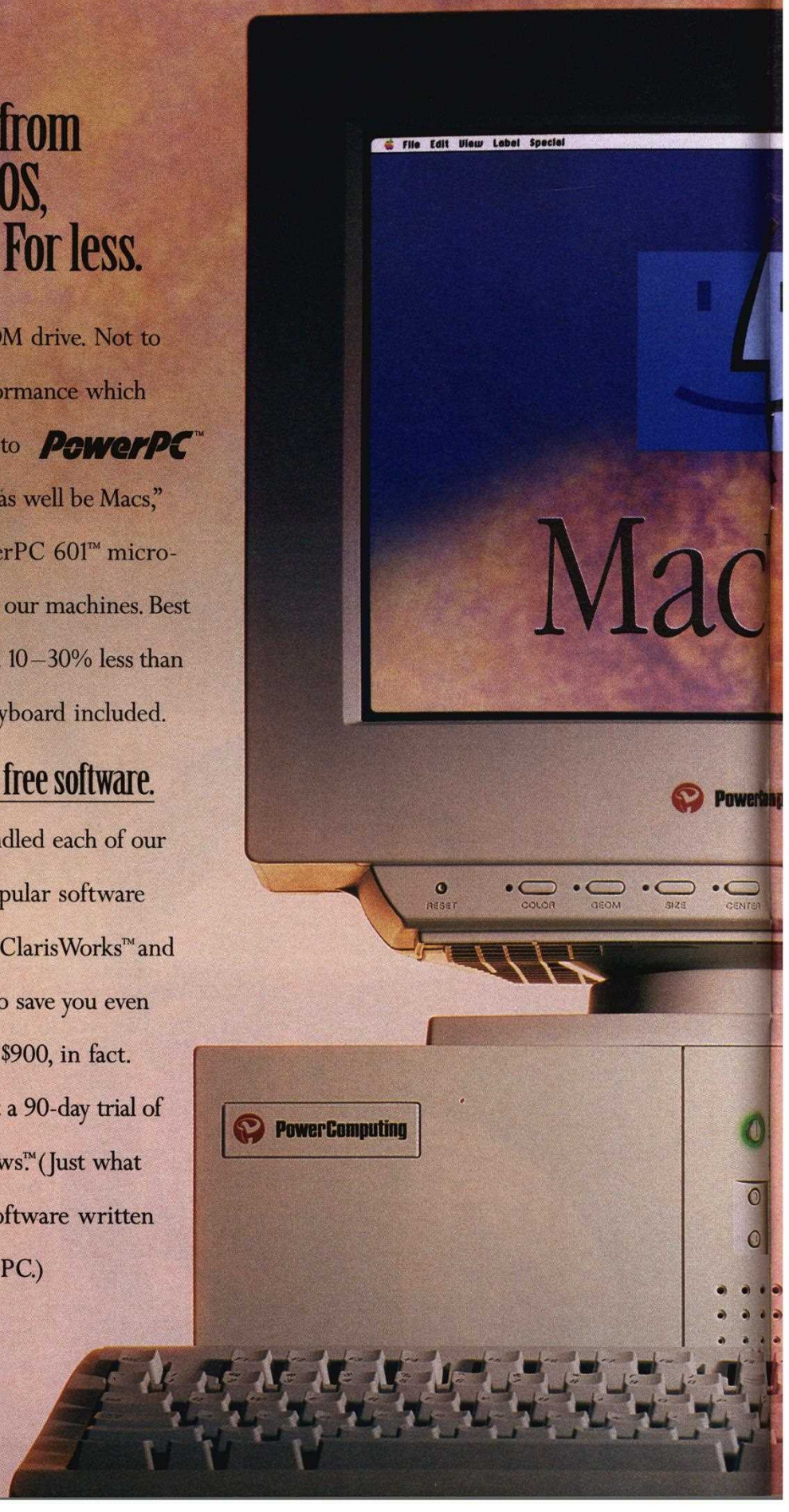

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— Pacific Media Associates

Dearth of Mac shelf space

Apple, developers feel retail pressure

By Kirsten L. Parkinson

It's a problem every Mac user who has been in a retail computer store is aware of: the lack of space given to Mac software.

And if Apple hopes to survive, it will have to act fast to correct the situation, according to analysts.

"Unless they do a better job of supporting Macintosh software developers, they're toast," said Richard Miles, president of Re:Launch of Berkeley, Calif. "If you go into stores where [Apple] has been successful, 20 percent of the hardware [the store] has sold is Macintosh. But these stores don't have a single bit of Mac software."

But an Apple marketing executive last week said the company has a plan to secure more shelf space.

Jack Rotolo, Apple's manager of business development for home markets, said the company is working with developers on marketing programs to increase awareness and demand among users for Mac software titles. Through a combination of increased advertising, e-mail, catalogs bundled with Performas and infomercials, Apple expects to create demand and win more retail space.

The company also plans to collaborate with retailers on in-store merchandising and space-management strategies to land lucrative endcaps and secondary displays, Rotolo said.

For now, however, limited Macintosh shelf space is a problem. Industry observers said it is a reflection of the installed bases of Windows and Mac users, and it becomes a self-perpetuating problem that will move Apple customers and developers over to the Windows platform.

"You go into computer stores, and you see that you're a second-class citizen," said Jeff Silverstein, editor of the Software Industry Bulletin in Stamford, Conn.

The problem will only be exacerbated by the Aug. 24 introduction of Windows 95, Silverstein said. "The stores will have a tremendous inflow of Windows 95 products," he said. "There will be additional pressure on Mac space."

Mac developers said a lack of shelf space is not a dilemma they can afford to solve themselves. Endcap displays in retail stores can cost as much as $50,000, said Tom Swinford, director of marketing at Now Software Inc. of Portland, Ore. "That's out of reach for a lot of vendors," he said.

Smaller developers are turning to alternative methods of distribution, including catalogs and direct mail. However, these routes can also be expensive, developers said.

Furthermore, Apple is reportedly considering cutting the number of Apple authorized catalogs from 15 to a handful, sources said.

"The catalogs charge a lot of money," said Dave Johnson, president of Working Software Inc. of Santa Cruz, Calif. "The product has to be known somehow before customers will buy it. With shelf space, they can actually pick up a box and read it."

Added Re:Launch's Miles: "[Apple] should buy Macintosh software pavilions in resellers ... to bring Mac software in." □

MacWEEK index
GATES NATION

Microsoft Corp. CEO Bill Gates is the richest man in the world, but how does his personal worth stack up against the gross national products of several countries?

United States	$6.4 trillion
Japan	$4.3 trillion
Germany	$1.4 trillion
India	$240 billion
Kuwait	$15.3 billion
Bill Gates	$12.9 billion
Sudan	$5.2 billion
Jordan	$3.6 billion
Nicaragua	$1.7 billion
San Marino	$465 million

Sources: Forbes, 1995 Information Please Almanac.

Mac software sales on rise

By Jon Swartz

Just think of David Nagel as the Jeane Dixon of the Mac world.

Most of the time, he's senior vice president of Apple's Worldwide Research & Development division. But Nagel's prediction in the spring that Mac software sales would sizzle this summer was downright clairvoyant.

The Software Publishers Association prefers to think the 10 percent rise was predictable, considering the selling strength of Power Macintoshes. The Washington, D.C.-based organization said shipments of the RISC machines — 1.4 million and counting — have rekindled Mac software development.

Indeed, Mac application sales in North America passed DOS for the first time; during the first three months of 1995, Mac sales were $307.5 million, compared with $268.6 million for DOS. According to the SPA, the Mac market swelled from $278.8 million in the same quarter a year ago, while DOS sales plunged 25 percent, from $358.2 million last year.

SPA officials said the fastest-growing segment of the Mac market in early 1995 was entertainment, with $26.7 million.

As usual, Windows applications dominated quarterly sales, with $1.43 billion, up 43 percent from $996 million a year ago. Total software revenue increased 25 percent, to $2.03 billion from $1.62 billion last year, the SPA said. □

Boca Research to buy Hayes, assume debt

Hayes Microcomputer Inc., mired in Chapter 11 bankruptcy protection since November 1994, has been acquired by rival Boca Research Inc.

Under terms of the deal, Boca Research will transfer $1.68 million of its stock to Hayes stockholders and pay off Hayes' $75 million debt. The agreement is expected to be completed this fall, according to Boca Research.

The merged company will continue to market products under Hayes' Practical Peripherals and Hayes product names.

It remains unclear how many of Hayes' 1,200-person work force will be relocated from Norcross, Ga., to Boca Research's corporate headquarters in Boca Raton, Fla.

Hayes blamed its financial woes on a cash crunch caused by months of manufacturing glitches, according to company president Dennis Hayes (see MacWEEK, Nov. 28, 1994, Page 24). □

Newton honed in Europe

By Holly Hubbard Preston

Leveraging its strength in the telecommunications field, Apple Europe will play a major role in helping to bolster the wireless capabilities of the Newton.

In an interview with MacWEEK, Apple Europe President Marco Landi acknowledged that the Paris-based division is working alongside Apple officials in Cupertino, Calif., to improve the Newton's mobility and connectivity features.

Landi said Apple Europe's 50-person R&D team is working with a number of undisclosed European partners to develop solutions to be sold in Europe and, possibly, the United States.

Although Landi declined to name those partners, sources within Apple identified telecommunications heavyweights Nokia Corp. of Helsinki, Finland; LM Ericsson of Stockholm, Sweden; and Motorola Inc. of Schaumburg, Ill., as some of the parties involved.

Among the technologies Apple Europe is currently working on is a voice/data transmission solution that will allow the transfer of a voice signal via Newtons or PowerBooks, according to Henri Aebischer, head of R&D for Apple Europe.

That effort and others, Aebischer said, are designed to make the Newton not only "usable but useful. ... That's why we're going beyond data and fax and trying to integrate it with the telephone and other services."

Aebischer's pragmatic tone is echoed by Landi, who doesn't mince words about what he sees as Apple's previous failure to back up good technology with practical, focused marketing.

Apple Europe's efforts to reposition the Newton should come as good news to Apple channel partners and customers on both sides of the Atlantic. The division is known both inside and outside the company as innovative in telecommunications.

It is unknown how much of Apple Europe's telecommunications projects will be ported over to the United States.

However, Christian Bubenheim, Newton system group product manager, said he expects American users will "soon see products that make use of the lessons we have learned in Europe." □

Apple Europe at a glance

- **Founded: 1981**
- **Headquarters: Paris**
- **President: Marco Landi**
- **Employees: 1,800**
- **Annual sales: $2.1 billion**

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BPA INTERNATIONAL

Share and share alike

Apple has decided that expanding market share is not that important anymore. It intends to get more dollars from its existing customer base, praying that the Macintosh platform will expand through clone makers.

The question for Mac users is: Has Apple finally faced reality or has it thrown in the towel?

The answer is not self-evident. One argument states, in effect, that so long as Apple continues to build great machines, it will always have customers. Another view holds that as the Mac's portion of the overall market shrinks, support from third-party developers diminishes with it, crippling the Mac further.

Let's assume that this major strategy shift is the right approach, that Apple will never be able to muscle enough of the market away from Wintel vendors, so it should build shareholder value by serving its existing customers better.

Certainly we've seen some excellent products targeted at Apple's publishing and graphics stronghold in recent weeks. And there's more to come. But Apple has stumbled badly in the past when it has come to developing new revenue streams to complement its core Mac and printer business.

Remember En Passant? It was the CD-ROM shopping experience you were supposed to flock to so Apple could enjoy an annuity business. It didn't happen that way.

How about eWorld? It's a fine service in many ways, but the company hasn't even been able to migrate itself to it after more than a year. It still lacks a Windows client. eWorld's share of the on-line market is worse than the Mac's share of personal computers. And when Microsoft Network arrives, that share will undoubtedly plummet further.

And don't even get us started on the Newton.

These were the technologies that Apple was going to rely on for steady and substantial revenue while it built the Mac's market share. We would like to know what Apple has in mind to grow revenues now that it is abandoning its old market expansion plans. □

THE SECOND DECADE HENRY NORR

The reality of PowerPC falls short of early promise

While other initiatives under Apple's 4-year-old alliance with IBM Corp. have stalled and stumbled, the PowerPC processor has in many ways been a stunning success. In collaboration with Motorola Inc., the partners delivered their first part, the 601, right on schedule, and it lived up to its promise: catching up with Pentium performance. For Apple it has been a savior.

But the 601, the partners argued from the start, was only a modest beginning. The *real* benefits of RISC would become apparent with its more mature siblings, the 603, 604 and 620, which were supposed to bring unprecedented levels of performance to their respective niches: notebooks and entry-level systems, mainstream desktop machines, and servers.

By that standard, the PowerPC program hasn't delivered the goods.

Let's focus on the 603 and the 604; the 620 looks like a major disappointment, but Apple has never planned to use it in the Mac line anyway.

Counting our blessings

The 603 powers the company's latest entry-level series, the 5200 and 6200. They're attractive systems — I'm certainly looking forward to the Performa 5200 I won in a recent raffle. But with complete Pentium systems now down around the $2,000 mark, the new 603-based Performas' advantage is elegance and integration, not price or performance.

Worse, consider the notebook arena, where it once seemed that the 603's low cost and power requirements would help Apple leave the competition in the dust: While low-power Pentium notebooks flood the market, and even plodding IBM peddles PowerPC-based ThinkPads, Apple still has no RISC PowerBook to offer. (Current models won't even run next year's Copland OS.)

The 603e and its beefed-up caches should soon alleviate the situation. But if the original version fell so far short of Apple's PowerBook performance objectives, its design has to be judged a fiasco. (I asked one PowerPC designer how, with all the simulation tools available to processor architects, the problems could have escaped detection until the chip was already in silicon. He just shrugged and offered the engineer's traditional excuse: "Garbage in, garbage out.")

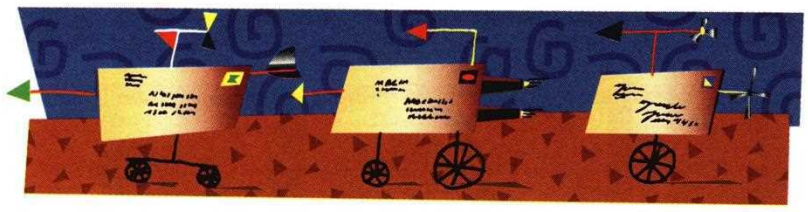
Top of the line

Then there's the 604. To judge by the Power Mac 9500, it's a great chip, faster than the fastest Pentium. But according to the authoritative Microprocessor Report, the 604's advantage in integer performance over a Pentium at the same clock speed turns out to be 15 percent, far from the 60 percent once projected.

A Motorola official acknowledged last week that Intel has pushed its architecture farther and faster than RISC proponents ever anticipated; he even admitted that it had effectively "caught up" with the PowerPC. But, he said, the PowerPC partners are "looking forward to getting back in the lead" and this fall intend to unveil a road map for getting there.

I, for one, can't wait to see it. □

Henry Norr, editor emeritus of MacWEEK, welcomes feedback in the MacWEEK forums on CompuServe or eWorld or at hnorr@ftp.macweek.ziff.com.



LETTERS

Media 100 misinformation

This is in response to the article, "Getting the Goods on Desktop Video" (MacWEEK, June 5, Page 14). You must have gotten the wrong goods on the Media 100 by Data Translation.

The reference to Media 100 as "near broadcast-quality" is a real slap in the face to the outstanding picture quality of the M100, which with the HDR (high data rate) option digitizes at 150 Kbytes per frame. Even professional, 20-year editing veterans find it virtually impossible to distinguish between an analog image and its M100 digital mate.

We hope that in the future MacWEEK will be more thorough in its coverage of professional video.

Stu McGowan
Stu McGowan Video
Burlington, Vt.

9500 price inflation

There appears to be significant inflation of the pricing of the new Macintosh 9500s before they're even available. In the cover story by Robert Hess (MacWEEK, May 29, Page 1), the pricing of the 120-MHz version is given as starting at "roughly $4,000" and the 132-MHz at $4,600. In the June 12 issue (MacWEEK, June 12, Page 1) the prices for the 120-MHz and 132-MHz models are given as $4,450 and $5,100, respectively.

In a more recent issue (MacWEEK, June 19, pages 1 and 28), pricing is stated to be $4,999 and $5,799, respectively. At this rate, by the time most of us have a chance to actually purchase one there will have been an inflation of 25 percent or more.

I realize that some of the increase in price for the 120-MHz machine may be because of the inclusion of a PCI video card, but this cannot be used as an excuse for the 132-MHz box.

What happened to the "reasonable" pricing originally quoted?

Marshall G. Doane
Schepens Eye Research Institute
Boston

Macs for the average guy

Not being a network administrator but, rather, one who works in a network environment, I was rather horrified at the wonders Henry Norr ascribes to Windows 95 in the area of security (MacWEEK, June 19, Page 24). Allowing network administrators to control my PC is akin to removing restrictions on the federal government's power.

The Mac is great because it empowers the average individual, who doesn't have to wait for the network person to make his machine do what he wants it to do. I would strongly urge Apple to NOT follow your advice; let Apple be the machine for the average guy, not the machine for the network administrator!

Scott Grannis
Director
Western Asset Management
Pasadena, Calif.

Watch your URLs

I just wanted to let you know that you ought to check the URLs (universal resource locators) that you print in stories if you can.

In a June 12th article, "Users find Mac a viable Web server" (MacWEEK, June 12, Page 37), I counted several URLs that don't follow the standard formats. I am the author of MapServe, which you gave a URL for in this article. I hope you will watch the URLs you publish in the future and make sure they both work and conform to the standards set forth by the Web development committee. Thanks.

Kelly Campbell, network administrator
Student Publications
Kansas State University
Manhattan, Kan.

Congratulations for once

Since it seems the majority of letters published deal with unsatisfied Mac issues, a congratulatory note is in order. For over one year I have received your magazine and find it invaluable. I am a sales rep/account manager with a large reseller and look forward to each weekly issue. My client relies on my current product knowledge and technical expertise. MacWEEK is the tool to accomplish that goal. The product information, review and, most importantly, tech tips, help me perform my job more efficiently and with greater accuracy. MacWEEK also gives me the knowledge to deal with most issues in a large corporate environment. Thanks again for your excellent publication, and keep the issues coming!

Justen D. Hix
Entex Information Services
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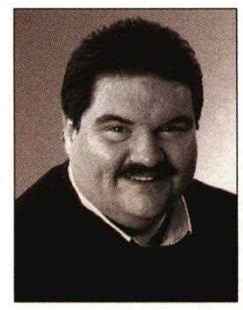
THE MAC MANAGER DON CRABB

Now is the time to prepare for migration to Copland

Gaze over at the Windows side of town. If you look closely, you'll see that deer-in-the-headlights look on Windows managers as they start to get the reports from Windows 95 beta testers.

Windows 95, which Microsoft Corp. claims will ship come hell or high water on Aug. 24, is still Bug Central. Many third-party peripherals don't work with it. It needs piles of memory worse than the Chicago Cubs need a World Series berth. It crashes with all manner of 16-bit DOS and Windows applications. And it's slow, even on fast Pentium iron.



Of course, it's still in its beta version, but if you'll check the calendar you'll note five weeks until ship date. That means Microsoft has either frozen the code or it's headed to the deep freeze now. It has to be if the company expects to package and ship it and have the channel full by that ominous date in August.

Gloat not

But this is no time to gloat. We may wag our fingers and say "too bad" (while thinking, "Those schmucks are gonna get what they deserve"), but now is the time to learn from our Windows colleagues' misery and plan our own graceful migration to Copland.

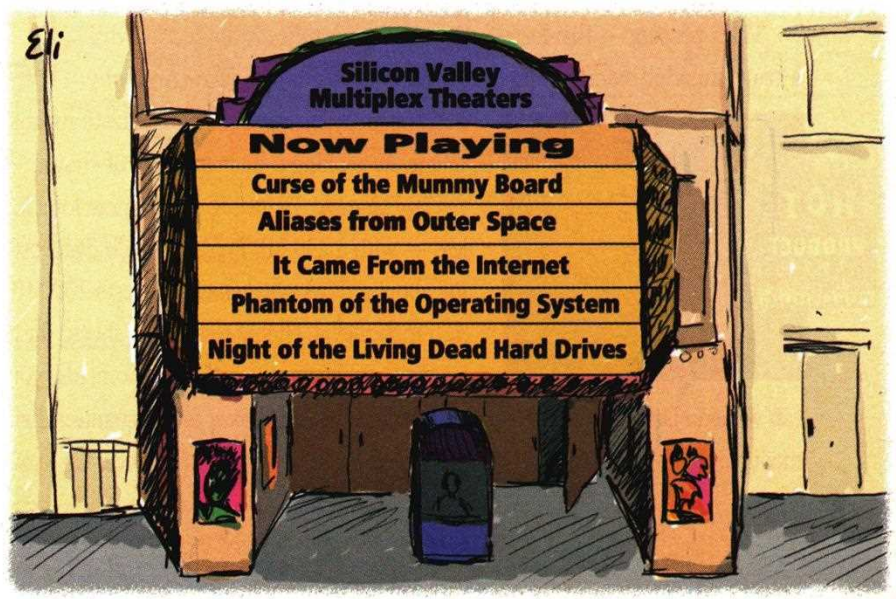
Apple — which practically rates a negative number on the Mercenary Marketing Scale, whereas Microsoft rates positive infinity — has not yet given us some foolhardy ship date for Copland. We assume it will be in the latter part of 1996, but that's good, particularly if it's sans bugs.

A one and a two ...

So we have plenty of time to get our acts together and plan for a successful transition to Copland. Mac managers should:

- Load up OpenDoc now and make sure to acquire the final version when it ships later in 1995. If you are not already an Apple associate developer, ante up the measly $250 fee and get the latest OpenDoc Component Software Toolkit for Macintosh CD. Start getting comfortable with the System Object Model, parts, containers, and the whole idea of open documents and their interface, since OpenDoc will be part and parcel of Copland.
- Pay attention to Apple this fall as it announces the alpha testing program. While it will be open to Apple partner developers, it's not unreasonable that Apple will include associates in the fun. If not, consider forking over the additional dough to become a partner. Having six to nine months (or more) to beat on alpha/beta versions of Copland will make the real transition smooth, especially because Copland is much more solid at its current development point (pre-alpha) than was Windows 95.
- Get a hold of one or more of the faux-Copland packages that are floating around the Internet. Stuff like Virtual Copland will give you some idea of how the desktop appearance and functionality are going to change.
- Start getting rid of your oldest, slowest Macs. Replace them with modern Power Macs or Mac OS clones. Make those minimum configurations a CD-ROM drive, 16 Mbytes of RAM (32 Mbytes would be better) and a 1-Gbyte hard disk. Make sure all your Macs are running the latest version of System 7.5. The transition from there to Copland will be reasonable. From earlier systems it will be dicier. □

Don Crabb welcomes comments at his Internet address decc@cs.uchicago.edu. You can also check out his home page at http://cs-www.uchicago.edu/~decc/.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Phantom of the Operating System
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Comments? Ideas? Contact Eli at elitoons@aol.com

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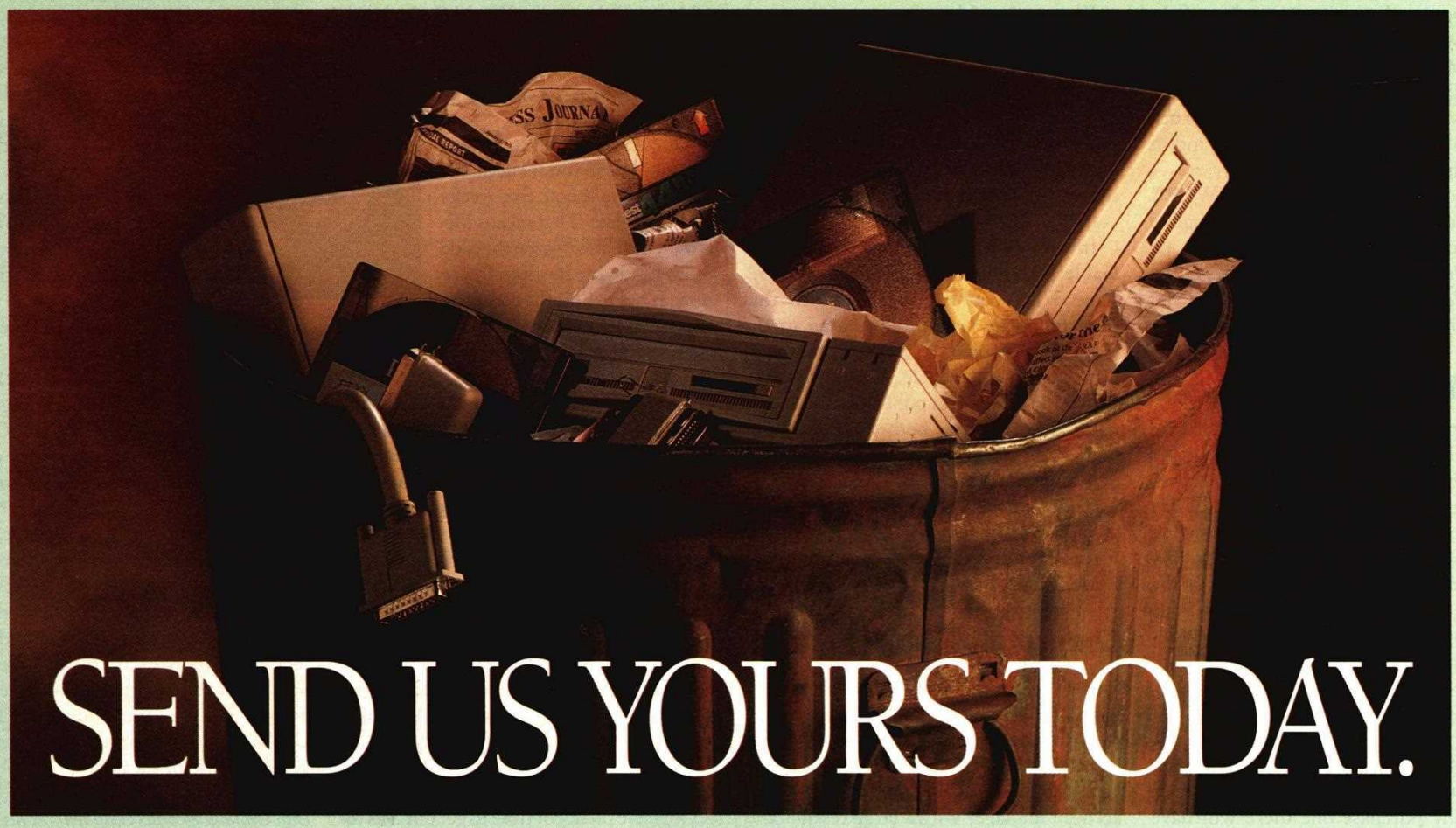

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☐ 01. Yes ☐ 02. No

1 What is your organization's primary business activity at this *entire* location?
(Select one only) Write Answer Here ➨

Non-Computer Related
01. Graphic Arts
02. Publishing
03. Advertising, Public Relations, Promotion
04. Digital Media Development
05. Entertainment/Broadcast
06. Commerical Printer
07. Service Bureau/ Pre-Press
08. Aerospace
09. Architecture, Engineering
10. Telecommunications
11. Government
12. Manufacturing
13. Education: College/ University/Trade
14. Education: High School/Elementary
15. Finance: Banking, Accounting, Insurance, Real Estate, Legal
16. Health, Medical
17. Non-Computer Retailer, Wholesaler, Distributor
18. Research and Development
19. Agriculture, Mining, Construction, Oil
20. Transportation, Utilities

Computer Related
22. Manufacturer (Computers, Software, Peripherals)
23. VAR, VAD, Systems/ Network Integrator
24. Retailer/Distributor
25. Systems House/Data Processing Service
26. Computer Consultant
27. Other Businesses and Services

99. Other_____ (please specify)

2 What is your job function?
(Select one only) Write Answer Here ➨

A. Networking/Data Communications
B. MIS/DP/Information Systems
C. Systems Engineering
D. Telecommunications
E. Graphic Arts/Design
F. Production/Pre-Press
G. Video Production
H. Audio Production
I. Communications/ Publishing/Public Relations/Advertising
J. Engineering/Architecture
K. Science/Research & Development
L. Education/Training/ Development
M. Manufacturing/ Operations/Production/ Quality Control
N. Administration/ Management/Personnel
O. Accounting/Finance/ Legal
P. Sales/Marketing
Q. Purchasing
R. Consulting

Z. Other_____ (please specify)

3 Which of the following brands of systems and/or applications software do you have installed at this *entire* location? (Check all that apply)

Operating Systems
☐ 01. System 7
☐ 02. System 6, 5 or earlier
☐ 03. Unix/Xenix/AUX/AIX
☐ 04. PowerOpen
☐ 05. Windows
☐ 06. NeXTStep
☐ 07. Solaris
☐ 08. OSF/Motif
☐ 09. Other_____ (please specify)

Network Operating Systems
☐ 11. Novell NetWare
☐ 12. Unix/NFS
☐ 13. LAN Manager
☐ 14. Banyan VINES
☐ 15. AppleShare
☐ 16. DEC PathWorks
☐ 17. Other_____ (please specify)

Groupware
☐ 19. Lotus Notes
☐ 20. Windows for Workgroups
☐ 21. FirstClass
☐ 22. Novell GroupWise
☐ 23. Apple Open Collaboration Environment (AOCE)
☐ 24. Other_____ (please specify)

Database Engines
☐ 26. Oracle
☐ 27. Sybase SQL Server
☐ 28. Ingres
☐ 29. Informix
☐ 30. 4D Server
☐ 31. DB2
☐ 32. Other_____ (please specify)

On-Line Services
☐ 34. America Online
☐ 35. Compuserve
☐ 36. e-World
☐ 37. Prodigy
☐ 38. Internet
☐ 39. Delphi
☐ 40. Genie

4 Please indicate the quantities of the computers currently installed and indicate the computers planned for purchase in one year at this *entire* location.

(Write in accurate quantities for all that apply)	Currently Installed (Quantity)	PLAN TO PURCHASE
Macintosh/Compatible		
Apple Power Mac 8100	1.	1. ☐
Apple Power Mac 7100	2.	2. ☐
Apple Power Mac 6100	3.	3. ☐
Radius Power Mac Compatible	4.	4. ☐
Power Computing Power Mac Compatible	5.	5. ☐
Daystar Power Mac Compatible	6.	6. ☐
Other Power Mac Compatible	7.	7. ☐
Macintosh Quadra	8.	8. ☐
Macintosh Centris	9.	9. ☐
Macintosh Performa	10.	10. ☐
Macintosh PowerBook	11.	11. ☐
Macintosh Duo	12.	12. ☐
Macintosh Other (II, LC, SE, etc...)	13.	13. ☐
Other Mac Compatible	14.	14. ☐
Other Desktops		
IBM/Compatible Desktop/Laptop/Notebook	15.	15. ☐
PowerPC (Non-Mac Compatible)	16.	16. ☐
Workstation (SPARC, MIPS, HP/Apollo, etc)	17.	17. ☐
Other Microcomputers	18.	18. ☐

USE NUMBERS ONLY

5A How many servers are installed at this *entire* location? (Use numbers only)

5B How many LANs are installed at this *entire* location? (Use numbers only)

5C How many Macintoshes are connected to the LANs indicated in Question 5B above? (Use numbers only)

6 If applicable: how many Macintoshes are sold, resold, or recommended in one year at this *entire* location?

A. Retailer: Number sold per year_____
B. Reseller: Number resold per year_____
C. Consultant: Number purchased by your clients through your firm's recommendation per year_____
D. Other: Number sold/resold/recommended per year_____
☐ E. Not Applicable

7A Which of the following Macintosh-related products do you specify, recommend, buy or approve the purchase of? (Check all that apply)

Systems
☐ 01. Apple Macintoshes
☐ 02. Mac Compatibles
☐ 03. IBM Compatible Micros
☐ 04. Servers
☐ 05. Workstations
☐ 06. Minis/Mainframes
☐ 07. Newton PDA
☐ 08. Pen-Based Computers

Networking
☐ 10. LANs
☐ 11. WANs
☐ 12. Mac to PC Links
☐ 13. Mac to Mini/ Mainframe Links
☐ 14. Mac to Unix Workstation Links
☐ 15. Modems
☐ 16. Communication/ Network Software
☐ 17. Bridges/Routers/ Gateways
☐ 18. Hubs
☐ 19. NICS

Printers
☐ 21. Laser
☐ 22. Color Laser
☐ 23. InkJet
☐ 24. Color InkJet
☐ 25. Dye Sub
☐ 26. Thermal Wax
☐ 27. Plotter
☐ 28. Portable Printer

Image Input
☐ 30. Digital Camera
☐ 31. Flatbed Scanners
☐ 32. Handheld Scanners
☐ 33. Slide Scanners
☐ 34. Drum Scanners
☐ 35. Black/White Scanners

Displays
☐ 37. 14 inch
☐ 38. 15 inch
☐ 39. 17 inch
☐ 40. 21+ inch
☐ 41. LCD Projection Panel
☐ 42. Presentation Monitors

Peripherals
☐ 44. UPS
☐ 45. External Speakers
☐ 46. Input Devices
☐ 47. Video Deck
☐ 48. Image Setter

Storage
☐ 50. Photo CD
☐ 51. Magneto Optical
☐ 52. RAID
☐ 53. Hard Drive 1 Gig +
☐ 54. Hard Drive < 1 Gig

Add-In Boards
☐ 56. CD Recorder
☐ 57. Memory Boards
☐ 58. Display Boards
☐ 59. Video Digitizer Boards
☐ 60. Accelerator Boards
☐ 61. Sound Boards
☐ 62. MIDI
☐ 63. Video Capture/ Compression

99. ☐ None of the above

Signature_____

Title _____ Date ___/ ___/ ___

7B Which of the following systems and/or applications software do you specify, recommend, buy or approve the purchase of? (Check all that apply)

Graphic Arts
☐ 01. Desktop Publishing
☐ 02. Electronic Publishing
☐ 03. Painting/Drawing Programs
☐ 04. Photo Retouching
☐ 05. Page Layout
☐ 06. Illustration Programs
☐ 07. Fonts
☐ 08. Pre-Press
☐ 09. Color Management
☐ 10. Digital Video
☐ 11. Other_____ (please specify)

Multimedia
☐ 13. Authoring Software
☐ 14. Video Editing
☐ 15. Sound Editing
☐ 16. Music Composition/ Editing
☐ 17. Animation
☐ 18. Clip Media (Sound and Art)
☐ 19. Other_____ (please specify)

Presentation Graphics
☐ 21. Presentation Software
☐ 22. Multimedia Presentations
☐ 23. Charting Programs
☐ 24. Other_____ (please specify)

Design/Engineering
☐ 26. CAD/CAM
☐ 27. 2/D - 3/D Modeling
☐ 28. Simulation
☐ 29. Other_____ (please specify)

Business Applications
☐ 31. Word Processing
☐ 32. Spreadsheets
☐ 33. Databases
☐ 34. Project Management
☐ 35. Accounting/Payroll
☐ 36. Groupware
☐ 37. Desktop Video Conf.
☐ 38. Document Management
☐ 39. Mapping/GIS
☐ 40. Pen-Based Applications
☐ 41. Other_____ (please specify)

Systems Management
☐ 43. Operating Systems
☐ 44. Utilities
☐ 45. Applications Development
☐ 46. CASE
☐ 47. Programming Languages
☐ 48. Compilers
☐ 49. SQL Applications
☐ 50. Client Servers Applications
☐ 51. Other_____ (please specify)

99. ☐ None of the above

8 If you indicated purchasing involvement for computers, computer products or services in Question 7A or Question 7B, for how many Macintoshes do you have this involvement? (Select one only) Write Answer Here ➨

01. 2000+
02. 1000-1999
03. 500-999
04. 100-499
05. 50-99
06. 20-49
07. 10-19
08. 5-9
09. 1-4
99. None

9 For what applications are the Macintoshes at your location used? (Check all that apply)

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2. $2,500,000 to $4,999,999
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4. $600,000 to $999,999
5. $400,000 to $599,999
6. $200,000 to $399,999
7. $100,000 to $199,999
8. $50,000 to $99,999
9. $25,000 to $49,999
10. $10,000 to $24,999
11. Less than $10,000
99. None

Product Category	For this location (Write number in box)	For other locations (Write number in box)
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Desktops/Portables (Micros/Workstations)	B.	H.
Networking Products (include Servers)	C.	I.
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SECOND PRINTERS

Less than 35 percent of portable color printers are used by mobile professionals.

— BIS Strategic Decisions Inc.

Color StyleWriter 2200 proves easy travel companion

By Rick LePage

Apple's inkjet provides good performance and printing options for mobile users.

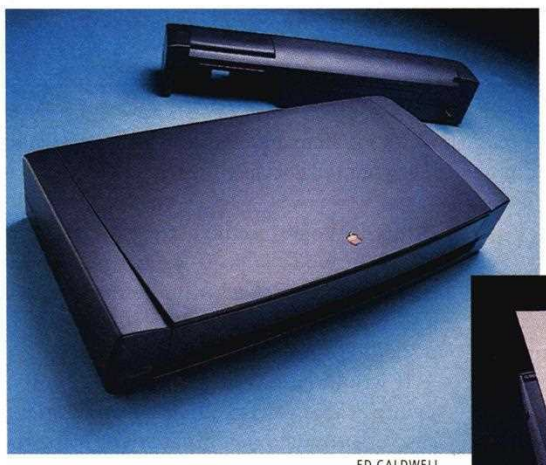
If you weren't paying close attention at last month's rollout of Apple's PCI-based Macs and color printers, it would have been easy to miss the Color StyleWriter 2200, especially given its small size. For many PowerBook users, however, this new printer provides a big solution to a problem that has never been adequately addressed on the Mac platform: mobile color printing.

The Color StyleWriter 2200 is priced at $419. It weighs 3.2 pounds and is roughly the size of a thick trade paperback book — 11.8 inches wide, 8.2 inches deep and 2.2 inches high.

Like its monochrome and color siblings in Apple's StyleWriter line, the Color StyleWriter 2200 is based on a Canon liquid inkjet engine that provides either 360-dpi color output or 720-by 360-dpi monochrome output when used with the black-only print cartridge that ships with the printer. It has a built-in 30-sheet paper feeder that acts as a protective cover when the printer is not in use.

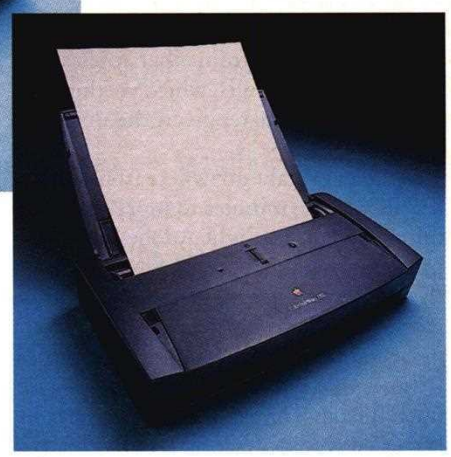
Apple supplies the interface cable, power adapter, ink cartridges and software with the Color StyleWriter 2200, making it ready to run out of the box. The documentation is thorough and easy to follow, which means you can be up and printing within minutes of unpacking the printer.

The Color StyleWriter 2200 ships with two cartridges: a color cartridge with replaceable CMY- and black-ink tanks, and the aforementioned high-capacity monochrome cartridge with only a black-ink tank. A small carrying case for storing opened ink cartridges that aren't in use is also included.



ED CALDWELL

The Apple Color StyleWriter 2200 is a 3.2-pound portable color inkjet printer that offers either 360-dpi color output or 720-by-360-dpi monochrome output. Aimed at mobile users, the printer can operate with a separate $129 nickel-metal-hydride battery pack.



Print drivers galore

In addition to the standard background print architecture most Mac users are familiar with, the Color StyleWriter 2200 ships with QuickDraw GX and desktop printer drivers. If you choose the Easy Install option, you'll use the new desktop printing architecture, a derivative of QuickDraw GX that allows you to drag documents onto a printer's desktop icon when you want to print to it.

The manual does a good job of explaining the benefits of the different print models and also includes instructions for removing any of the installed options from your system — a helpful touch — and a sadly realistic one, in the case of QuickDraw GX.

The Color StyleWriter 2200 supports Apple's ColorSync 2.0 color-matching system. In the short time we've been using ColorSync 2.0, which is also incorporated into the firmware of the Color LaserWriter, we've found it very helpful in maintaining color consistency when moving images among computers, monitors and printers.

The Color StyleWriter print driver also has a Watermark option, which places a background image on each page during the printing process. You can vary the density of the watermark so that it shows up only faintly on the page or is more pronounced. Apple includes eight watermarks with the Color StyleWriter driver. You can create your own by placing any PICT or PICT2 file in the Printing Prefs folder inside your System folder's Preferences folder.

The print driver also has the capability to print documents in two-up or four-up fashion, which reduces the output size during the printing process so that two or four pages can fit on a single sheet of paper. This is helpful when you want to save paper or need to print small, simply designed booklets, but it doesn't offer the same functionality as BookMaker Corp.'s ClickBook utility.

Performance

Like most liquid inkjet printers, the Color StyleWriter 2200 isn't especially speedy. Apple claims the unit can print up to five pages per minute of monochrome text in Normal or Draft mode, but in our tests we never achieved those times. A 10-page Microsoft Word 6 document took three minutes, 23 seconds to print in Normal

See StyleWriter, next page

score card

Color StyleWriter 2200

Apple
List price: $419*
Overall value ♦♦♦

Designed with mobile professionals in mind, the Color StyleWriter 2200 does a good job of balancing output quality and performance in a highly portable package. Apple provides a wide range of printing options, including drivers for desktop printing and QuickDraw GX. The support for ColorSync 2.0 means you can get consistent color prints from your PowerBook. The Color StyleWriter 2200's output is as good as most liquid inkjet printers and, apart from a few minor inconveniences, it is a snap to use. If you are looking for a secondary printer that can handle color, there are better options on the market, but if you really need to print on the road, the Color StyleWriter 2200 is a good choice.

Performance ♦♦♦
Features ♦♦♦
Configuration ♦♦♦♦
Compatibility ♦♦♦♦♦
Documentation/support ♦♦♦♦

**Battery attachment, $129.*

Key ♦♦♦♦♦ *Excellent* ♦♦♦♦ *Very good* ♦♦♦ *Good* ♦♦ *Fair* ♦ *Unsatisfactory*

IN BRIEF

DayStar 100 MHz PowerPro 601

Economical accelerator nears performance of 8100/100

Overall value ♦♦♦♦

Extending the life of existing Macintoshes has been DayStar Digital Inc.'s *raison d'être* for several years now The latest addition to its accelerator line continues that tradition in fine form. The $1,799 100 MHz PowerPro 601 turns any Quadra or Centris with a processor direct slot — including the 610, 650, 700, 800, 900 and 950 — into a fast Power Mac for less than half the price of a similar new system from Apple and much even less than a clone from Power Computing Corp. DayStar claims that the identically priced Turbo 601 offers similar performance for IIci owners who have yet to make the leap to PowerPC. (We did not test this accelerator.)

Graphic interests

DayStar says it believes the primary audience for the PowerPro, which requires System 7.5, will be graphics users with large investments in RAM and video cards. To sweeten the deal for these users, the company includes several Adobe Photoshop plug-ins.

Unfortunately, both the PowerPro Photoshop extension (which accelerates a number of common filter functions, including Gaussian Blur, Unsharp Mask and Despeckle), and the PowerPro PowerPreview (which offers a new filter interface with a real-time preview), offer benefits only to Photoshop 2.5.1 users. The plug-ins work

See PowerPro, next page

The Color StyleWriter 2200 incorporates QuickDraw GX's Watermark feature, which allows you to place PICT or PICT2 images in the background of any printed document.

StyleWriter

From previous page

mode and 5:58 in the high-quality Best mode. Documents from other applications gave us similar results, which we think are more than adequate, given the design of the printer.

Color pages take anywhere from slightly less than three minutes to more than four minutes to print. Eight Adobe Photoshop images, ranging from 2 to 8 Mbytes, took slightly more than 30 minutes to print on glossy stock, and our five-page PowerPoint presentation sailed through in 17 minutes.

Ink usage will vary widely, depending upon the types of pages printed. The color cartridge's black-ink tank is fairly small — our first one ran out after 50 pages of varied output. We suggest you use the monochrome cartridge for basic text printing.

Image quality

The Color StyleWriter 2200's print quality is generally as good as most of its competitors in the liquid inkjet field. Black text reproduction is quite good in the 720-dpi mode at most type sizes and it is acceptable at lower resolutions. However, the Color StyleWriter 2200 suffers from the same inherent limitations as its cousins: You can't throw a blob of liquid ink at a plain-paper page at high speed without getting some splattering. Type at small sizes (less than 9 points) will appear fuzzy unless you use the costlier glossy paper stock.

When printing images or color presentations, the Color StyleWriter 2200 doesn't quite approach the level of detail found in Epson America Inc.'s Color Stylus, but then again, it doesn't take 10 minutes to print a high-resolution graphic with the Color StyleWriter. We did find, however, that well-crafted images and presentations printed beautifully on the glossy paper and backprint film.

Truly mobile

Apple offers an optional battery attachment for the Color StyleWriter 2200. This $129 module connects to the back of the unit and weighs slightly more than a pound (with the rechargeable nickel-metal-hydride battery installed). What this means is that many users with mobile printing needs will be able to leave the Color StyleWriter's power cord at the office when they travel.

Apple claims that the battery pack will print 200 pages between charges depending on the types of document printed. We tested the battery attachment through two full cycles, printing a variety of color and black-and-white documents, and both times it was able to print well over 150 pages.

It would be nice if Apple either built a printer cable into the battery attachment case or provided a compartment for storing the cable on the road.

To save power, the Color StyleWriter 2200 shuts itself off after five minutes of inactivity, which sounds good in theory but proved frustrating in practice. Unlike the StyleWriter 2400, which will automatically power itself back on if it detects an incoming job while it's in Sleep mode, you have to physically press the power switch to restart the 2200.

While we understand energy requirements and battery charge life, we believe there should be an option for a longer power-on time when the unit is connected to AC power. It was a constant annoyance for us to print a job and then a minute later get a dialog box informing us that we had to turn on the printer.

Conclusions

The Color StyleWriter 2200 does a good job of addressing its intended target: mobile computing users who need to print outside of the office. For many PowerBook owners, it is compact and easy enough to use that it could double as a primary printer in the office. With the optional battery attachment, you could leave the printer's power adapter in the office, reducing the need to remember yet another adapter or cable to bring with you.

The performance of the Color StyleWriter 2200 is roughly what you would expect of an inkjet printer, and the quality is very good when you print on the coated or glossy stock. We do think Apple should take a page from Hewlett-Packard Co., though, and include a media sampler with the printer so that users can easily see the improved quality achieved when printing on the coated or glossy paper stocks.

If you're looking for an inexpensive color inkjet to use as a secondary printer in your home or office, the Color StyleWriter 2200 isn't really the best choice — Epson's Color Stylus or Apple's Color StyleWriter 2400 are better options. As a mobile solution, however, the Color StyleWriter 2200 does a good job for those of us who need to print in a lot of places.

Apple can be reached at (408) 996-1010 or (800) 462-7753; http://www.info.apple.com. □

PowerPro

From previous page

with Photoshop 3 but aren't any faster than the native code Photoshop now offers.

Open it up

Installing the PowerPro in a Quadra 950 is an extremely easy task. You simply plug the accelerator into the processor direct slot, run the installer and restart. DayStar's accompanying control panel offers simple options for turning the card, the Modern Memory Manager and the on-board 1 Mbyte of Level 2 cache on and off. In addition, it gives you the option to display a small icon in the menu bar that specifies whether you're currently using the accelerator's PowerPC chip or the motherboard's 680x0 processor. We found this simple feature to be very handy.

Unlike DayStar's original asynchronous PowerPro accelerators, which ran at speeds independent of the host motherboard, these new boards feature a synchronous design that runs the on-board PowerPC processor at exact integer multiples of the original system clock. For example, in our 33-MHz Quadra 950, the PowerPro card triples the clock to 99 MHz. This is how Apple's original Power Macintosh Upgrade Card — upon whose design these cards are based — worked, although the Apple card only doubled the speed of the host processor. On 25-MHz machines such as the Quadra 700, DayStar offers a DIP switch that lets you switch to a 4x setting. Unfortunately, switching to a 4x setting on a 33-MHz machine does not give you blazing 132-MHz performance; instead, the Mac just won't start up.

One benefit of this synchronous design is that the PowerPro can use the motherboard RAM without incurring a significant performance hit. The performance of the original DayStar PowerPC accelerators, on the other hand, suffered if you didn't use their on-board SIMM slots.

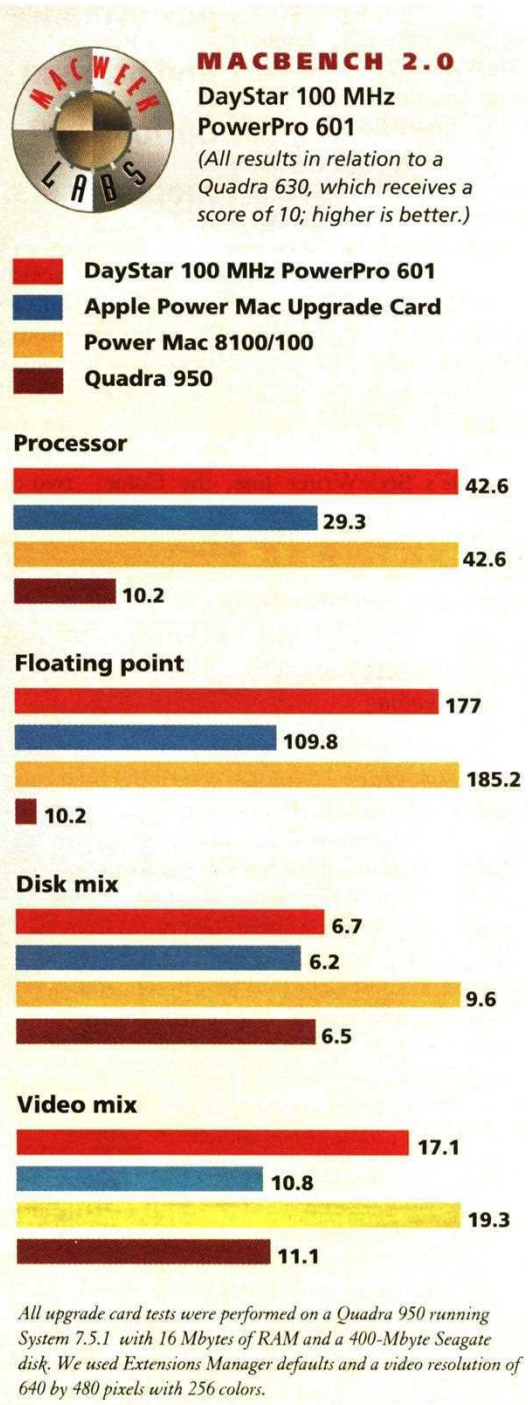
Performance

In a series of tests conducted with MacBench 2.0, the 100 MHz PowerPro 601 performed surprisingly well, matching or nearly matching the results of a Power Mac 8100/100 (see chart, right). The card's large Level 2 cache obviously helps it overcome some of the inherent bus limitations that a plug-in card faces. Even the 950's internal video performance was boosted to nearly that of the speedy Power Mac internal video results.

Real-world application tests offered similarly impressive results. WordPerfect 3.1 scrolling, Photoshop 3 filters and other

See PowerPro, Page 31

DayStar's PowerPro control panel displays the card's status, lets you select motherboard or accelerator card start-ups, and allows you to toggle a menu bar status indicator.



All upgrade card tests were performed on a Quadra 950 running System 7.5.1 with 16 Mbytes of RAM and a 400-Mbyte Seagate disk. We used Extensions Manager defaults and a video resolution of 640 by 480 pixels with 256 colors.

BLUE
BUILDING BLOCKS

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BLUE LIGHTNING — SCSI Accelerators

BLUE SPARK — Accelerated Storage

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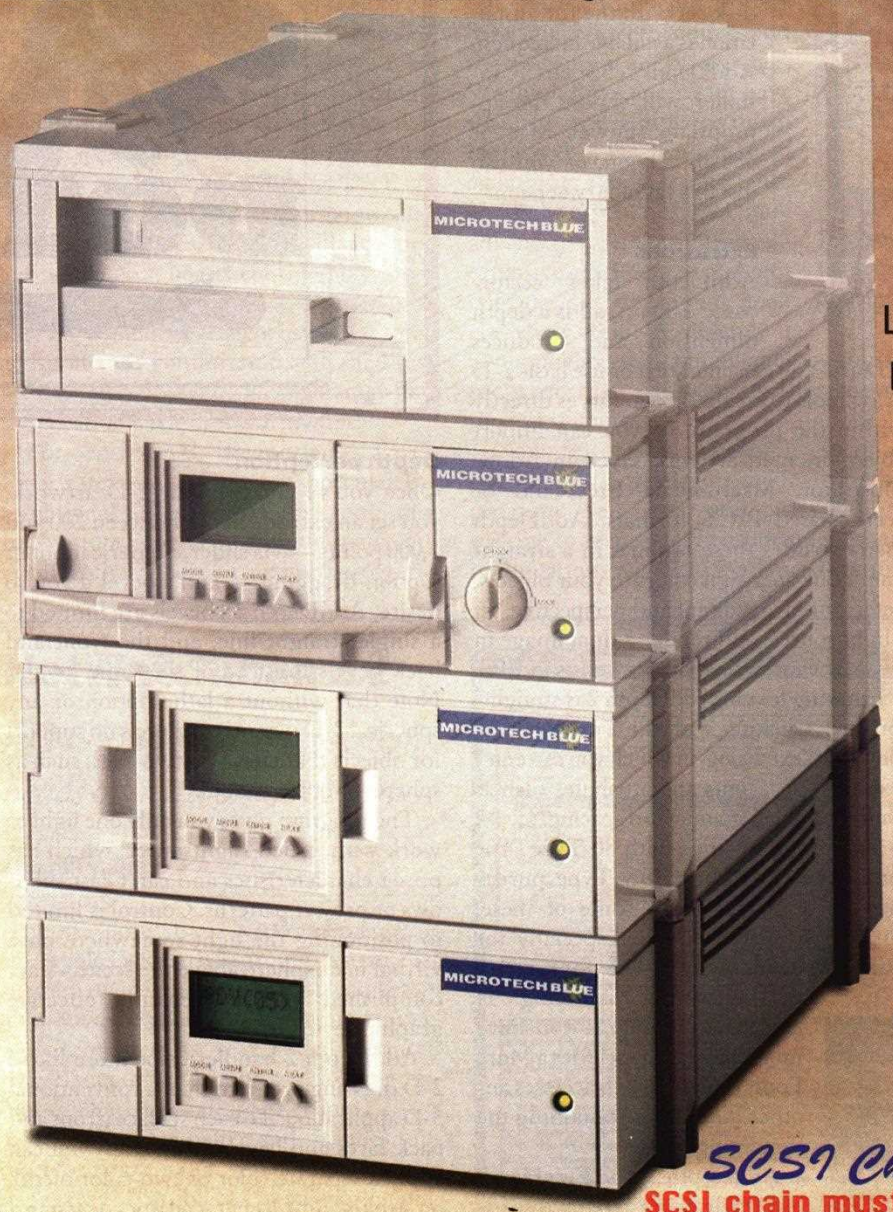

BLUE Line Design Enclosure

It's not just a better box. It's a better idea. Interlocking BLUE Line cases — each with four-inch power jumper — make rock-solid vertical or horizontal stacks a snap to build and to run off a single cord. Side-mount power-supply vents heat away from the drive. User-modifiable, front-mount LCD panel supports Power-Up, SCSI addressing, and Power Up sequencing. Need tech help? The LCD even provides Microtech's support number. All this plus enhanced data channel and subsystem design mean true BLUE Line excellence.

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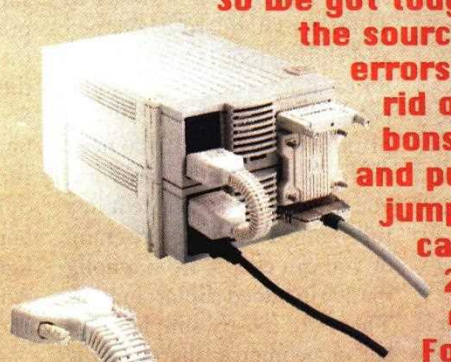

Result: BLUE Line products take the mystery out of SCSI chain management.

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AddDepth 2 takes users to the third dimension

By David Hauer

Ray Dream's extrusion app makes it painless to convert 2-D art into 3-D forms.

Ray Dream Inc.'s AddDepth 2.0 is an illustration program that attempts to make access to the third dimension as painless as possible. Targeted at business users and novice illustrators, the $99 program, offers a very basic but self-contained collection of 3-D tools that let you extrude 2-D PostScript line art and type into 3-D forms. Version 2 adds native Power Macintosh support, a wireframe mode, two wizards that aim to help users quickly create extruded graphics, and a plethora of bundled typefaces and clip art. The program is now also virtually identical and file-compatible with the Windows version.

For 680x0 Macs, a full installation of AddDepth 2 requires 5 to 8 Mbytes of RAM and about 14 Mbytes of hard disk space (excluding fonts), some two-thirds of which is for clip art; Ray Dream recommends 12 Mbytes of hard disk space for the Power Mac. The program's suggested memory partition of 4,800 Kbytes (it will run on as little as 3,300 Kbytes) is a tad conservative for complex artwork.

AddDepth 2 ships on a CD-ROM, so you will need a CD-ROM drive to perform the full installation. One floppy disk is also included that lets you perform a minimum installation, and a floppy disk set with the full installation is available on request. AddDepth's "smart" installer will choose the appropriate (Power Mac or 680x0) version, or you can install a fat binary version.

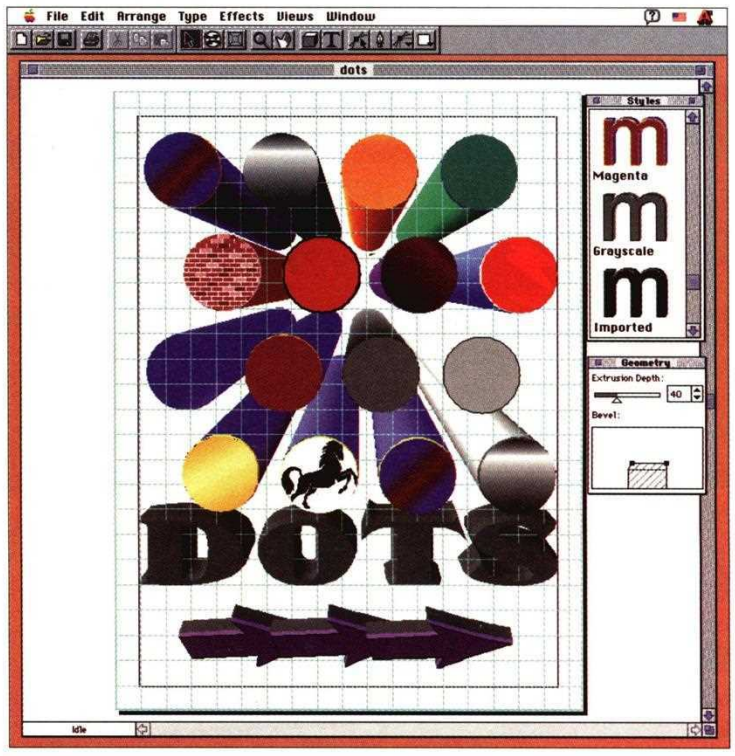
Extrusions

AddDepth takes vector-based 2-D art, adds a depth dimension and produces 3-D art. You can enter text or use basic 2-D draw tools to create Bezier curves directly within the program, or you can import object-oriented artwork saved in Adobe Illustrator, Macromedia FreeHand or vector-based PICT formats. AddDepth then extrudes these outlines in a straight line. You can assign colors to your objects, determine a viewpoint and perspective, set a light source, and render a final image in any of the input formats, as well as in EPS.

Entering text in AddDepth 2 is straightforward. Clicking with the Text tool presents the Text dialog, in which you can enter text and select fonts and attributes such as leading, and letter and word spacing.

The program ships with 30 TrueType fonts from FontBank Inc. Type purists may be unimpressed by some of these, but they are quite usable, especially for extruding. Annoyingly, the font menu is limited to displaying 34 choices at a time; if you have more, the menu includes a More Fonts option, which accesses another dialog box containing the remaining fonts.

AddDepth 2 is no FreeHand, but its drawing tools are sufficient for many graphics tasks. In addition to standard Bezier pen and editing tools, there is a tool for creating symmetrical closed polygons and a scalable 3-D box primitive. That's it. If you need more sophisticated artwork, you can, of course, create it in a full-fledged drawing program, or you can choose from among the 200 included clip-art images. These are mostly simple dingbat or geometric shapes, some quite attractive, some not. As many of AddDepth 2's templates and examples show, a few ingredients can go a long way when combined creatively. However, we wonder if AddDepth 2's target audience will really want to spend the kind of time and effort it will require to make much of the included clip art useful.



Ray Dream's AddDepth 2 saves combinations of surface effects as Styles. The extrusions here show all the preset Styles, plus two custom ones — the unicorn decal and the arrow coloring.

Depth perception

Once you've created your 2-D artwork, you set an extrude depth between 200 and 1,000 points — via slider, numeric input or Option-dragging — and a bevel if you so desire. AddDepth 2's bevels are limited to a single straight line, and the front and back bevels must be of the same height. Note that without a lathe option or any spherical 3-D primitives there's no support for objects that curve on two axes, such as spheres or bottle shapes.

The program gives you only one light to work with, called Lightsource, which has preset characteristics and can't cast shadows or project patterns. Control is limited to positioning the light somewhere on a virtual hemisphere above the scene — accomplished via an elegantly effective graphic device.

AddDepth 2 handles color more like a 2-D drawing program than a conventional 3-D application. To each surface (front and back faces and bevels, plus sides) you can apply a separate color or two-color blend, set stroke-and-fill characteristics or assign a single shaded color. Finally, you can apply pre-existing artwork as decals to the front and back faces. All of these options can be saved as Styles for reuse. You can't combine these effects on a single surface, though, or use such quintessential 3-D effects as bump-mapping, specular highlight or procedural textures. AddDepth 2 supports both RGB and CMYK color models.

Help me if you can

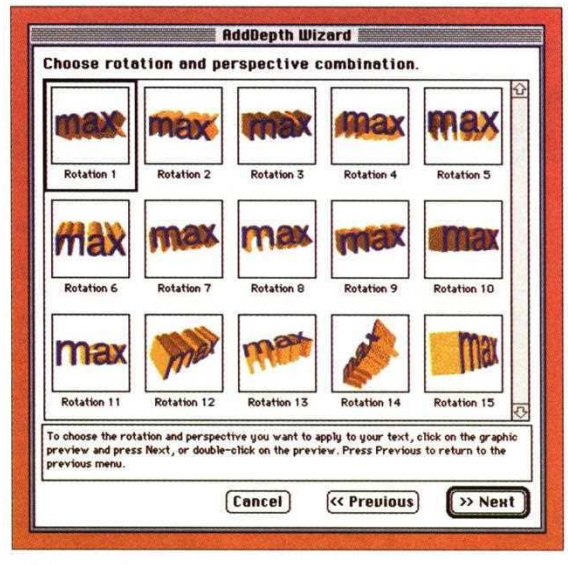
For those short on time, skills or creative inspiration, AddDepth offers two levels of assistance: the Template wizard and the Step By Step wizard.

The Template wizard consists of about 100 canned scenes that fall under three categories: Art and Design, Icons, and Mostly Text. You can use the templates as they are by simply adding your own text, or you can edit them to your heart's content by moving, adding or deleting objects or changing perspectives or styles, in addition to using any of AddDepth's standard editing tools. Merely changing viewpoints can give you a completely different picture, so these scenes are more than they seem. Still, it's hard to imagine most users finding more than a handful of them very useful and visually pleasing.

The Step By Step Wizard, which works only with text, walks you through the process of selecting the right parameters for a particular look. Novices will find this a boon, though it would be more useful if some kind of preview was included. Ironically, AddDepth 2's very simplicity lessens the value of such shortcuts.

For a program with AddDepth 2's pretensions to ease of use, a few of its features are strangely convoluted. Making a compound path, for example, is cumbersome and nonintuitive. Also, AddDepth 2's tool palette has something of a Windows feel,

See AddDepth, next page



AddDepth 2's Step By Step wizard presents a series of screens, each offering preset choices about a particular combination of attributes, as well as rotation perspectives.

score card

AddDepth 2.0

Ray Dream Inc.
List price: $99*
Overall value ◆◆◆

Ray Dream's AddDepth 2.0 simplifies the process of working in 3-D by keeping features and options to a minimum while providing all the necessary tools for extruding 2-D line art and type into 3-D forms. This inexpensive upgrade, $80 less than the previous version, clearly adds value to the program with the new Template and Step By Step wizards, which help users automate the process of creating 3-D art. Native-mode operation boosts performance that was already acceptable, and the new wireframe mode reduces wait times even further. Users looking for comprehensive drawing tools or extensive 3-D functionality will be better served by Adobe Dimensions or a bit-mapped program such as Specular International Ltd.'s LogoMotion, but graphics greenhorns and corporate users dabbling in 3-D will be happy with AddDepth.

Performance ◆◆◆◆
Features ◆◆◆
Ease of use ◆◆◆◆
Documentation/support ◆◆◆

**Upgrades from previous versions, $39 until Aug. 31; $49 thereafter.*

AddDepth

From previous page

and the manual always gives Windows directions before the Mac equivalents. Still, the directions are clear and screen shots are balanced between the two platforms.

Free and competent technical support is available via toll call and all the major on-line services. Our calls usually got through at once, but there's no provision for holding, so you may have to leave a message. When we did, we got a call back within 24 hours.

Performance art

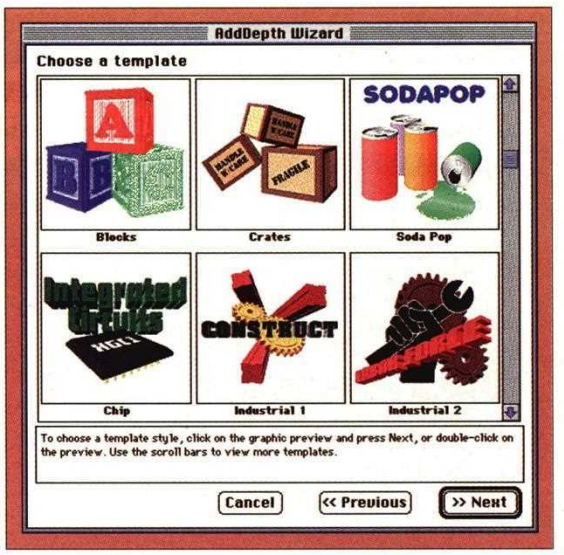
Native-mode operation improves AddDepth 2's performance considerably over the previous version. On a Power Mac 6100/66, the overall feel was much snappier than on a Centris 660AV, and basic maneuvers such as extruding a 110-point text block, which took about four seconds on the 68040 machine, were virtually instantaneous. More-complex actions had their times cut by 40 percent to 130 percent. Not that AddDepth 2 requires a Power Mac: Ray Dream says the program will run on a 68020 machine, and we found it quite usable on a IIci.

New to Version 2 is the optional wireframe display mode, which will be especially welcome to 680x0 users because it greatly speeds the time-consuming redraws to which AddDepth is prone. This mode shows the object's general shape minus detailed or surface characteristics. Unfortunately, there's no hidden-line removal, which can make wireframe images with more than one or two objects virtually unintelligible.

Competitive angle

As a vector-based program, AddDepth 2's competition comes from Adobe Dimensions, which now includes a full complement of drawing tools, and to some extent HSC Software Corp.'s KPT Vector Effects, a collection of Illustrator/FreeHand plug-ins (see MacWEEK, June 26, Page 35). However, both of these programs are geared toward experienced illustrators, and while each boasts considerably more features than AddDepth 2, neither is as easy to use nor as inexpensive. Graphic artists already comfortable with the Illustrator modus operandi, however, may find the additional features worthwhile.

For entry-level, logo-oriented 3-D, Pixar's (text-only) Typestry, Specular International Ltd.'s LogoMotion and Strata Inc.'s StrataType 3d provide alternatives to AddDepth 2. These bit-mapped programs are much more capable at conventional 3-D tasks such as surface mapping, and they offer animation tools as well. They also require a greater understanding of 3-D concepts and techniques and produce resolution-dependent output.



The Template wizard, one of AddDepth 2's graphics assistants, lets you choose a template from a variety of different options — six are shown here — by clicking on the icons.

Conclusions

Utterly devoid of frills and special effects, AddDepth 2 offers basic but complete controls and functionality at a very low price. We think Ray Dream may have stripped away a little too much in the way of key features, such as lathing, shading/reflectance and lighting options, and more advanced users wanting an extensive feature set or photo-realistic output should look elsewhere. Still, AddDepth is a reasonably self-contained, easy-to-use program that performs well even on modest systems.

New features in Version 2 such as wizards and a wireframe mode make the program even easier and faster. Those seeking to spruce up their documents and presentations will like its balanced feature set and easy learning curve, while newcomers to the world of 3-D will appreciate the chance to get their feet wet without taking a full plunge.

Ray Dream Inc. of Mountain View, Calif., can be reached at (415) 960-0768 or (800) 846-0111; fax (415) 960-1198; ray.dream@applelink.apple.com. □

PowerPro

From Page 28

tasks all blazed along at a snappy rate. The bottom line is that this board will turn your aging Macintosh into an agile new machine; that is, of course, after you update your software to native Power Macintosh versions and ensure that any expansion cards have updated, Power Mac-compatible ROMs.

Documentation and support

DayStar includes separate manuals for the accelerator and the Photoshop plug-ins. The manual for the accelerator is well-written and thorough, offering numerous installation photos and specific information on how to install the card in each type of machine. The company also offers knowledgeable phone support via a toll call and is available on all the major on-line services.

Conclusions

If you have a significant investment in Quadras or IIci machines, or simply don't have the capital to buy the level of Power Mac performance you'd like to own, the 100 MHz PowerPro 601 is a great option. For a relatively reasonable price you can upgrade your older machines to a performance level near the top of the current Power Mac heap and ensure that you'll get a few more years of useful work from them. Plus, the card is a breeze to install and works completely transparently. It may not be as fun as buying a new machine, but for those on a limited budget, the 100 MHz PowerPro is a solid choice.

Daystar Digital Inc. of Flowery Branch, Ga., can be reached at (404) 967-2077 or (800) 962-2077; fax (404) 967-3018; sales@daystar.com. — *By Bob O'Donnell*

NetWatchman 2.2

AG Group's warning system heads off network problems

Overall value ◆◆◆◆

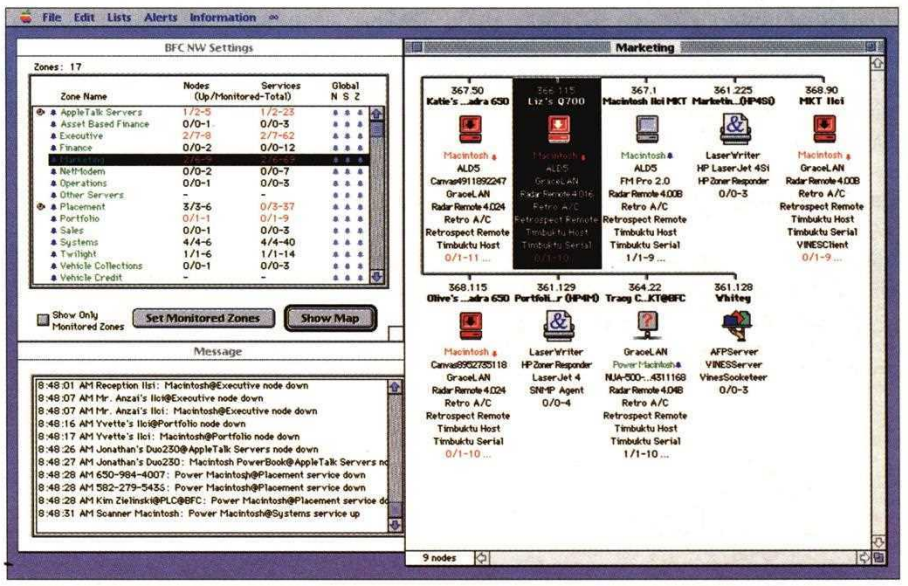
The AG Group Inc.'s NetWatchman 2.2 is an AppleTalk early-warning system that alerts network managers to problems before they have the chance to irritate users. Version 2, released last year, added enhanced pager support and improved logging options. The latest release, Version 2.2.1, is now Power Mac-native and includes support for AppleScript, which opens a whole new array of capabilities for network monitoring, logging and notification.

The $295 NetWatchman is an AppleTalk-only product and, therefore, does not compete directly with higher-end network monitoring products such as Caravelle Networks Corp.'s NetWorks or those built on platforms such as Sun Microsystems Inc.'s SunNet Manager, Hewlett-Packard Co.'s OpenView or IBM Corp.'s NetView.

NetWatchman can be used on virtually any Mac running System 6.0.5 or later and requires a paltry 750 Kbytes of RAM to monitor most small-to-medium-sized networks (less than 400 nodes). If you plan on using the AppleScript features, you will also need to have the AppleScript extensions installed.

Installation

To install NetWatchman, you simply copy the files from a single floppy disk onto a hard disk or partition, and you are ready to begin.


File Edit Lists Alerts Information
BFC NW Settings
Zones: 17
Zone Name
Nodes (Up/Monitored-Total)
Services (Up/Monitored-Total)
Global N S Z
AppleTalk Servers 1/2-5 1/2-23
Asset Based Finance 0/0-1 0/0-3
Executive 2/7-8 2/7-62
Finance 0/0-2 0/0-12
NetModem 0/0-2 0/0-7
Operations 0/0-1 0/0-3
Other Servers - -
Placement 3/3-6 0/3-37
Portfolio 0/1-1 0/1-9
Sales 0/0-1 0/0-3
Systems 4/4-6 4/4-40
Twilight 1/1-6 1/1-14
Vehicle Collections 0/0-1 0/0-3
Vehicle Credit - -
Show Only Monitored Zones
Set Monitored Zones
Show Map
Message
8:48:01 AM Reception IIsi: Macintosh@Executive node down
8:48:07 AM Mr. Anzai's IIci@Executive node down
8:48:07 AM Mr. Anzai's IIci: Macintosh@Executive node down
8:48:16 AM Yvette's IIci@Portfolio node down
8:48:17 AM Yvette's IIci: Macintosh@Portfolio node down
8:48:26 AM Jonathan's Duo230@AppleTalk Servers node down
8:48:27 AM Jonathan's Duo230: Macintosh PowerBook@AppleTalk Servers
8:48:28 AM 650-984-4007: Power Macintosh@Placement service down
8:48:28 AM 582-279-5435: Power Macintosh@Placement service down
8:48:28 AM Kim Zielinski@PLC@BFC: Power Macintosh@Placement service
8:48:31 AM Scanner Macintosh: Power Macintosh@Systems service up
Marketing
9 nodes

A typical console in NetWatchman displays a list of zones being monitored, a list of messages, and a map that lets you zoom in on all the nodes and services in a particular AppleTalk zone.

When you first launch the program, you must select the zones on your network that you would like monitored. You can add to or delete from this list at any time, and save your configuration in a settings file so they can be recalled later. You can also use this feature to create a variety of monitoring configurations if you want to watch different portions or services on your network at different times.

Be alert

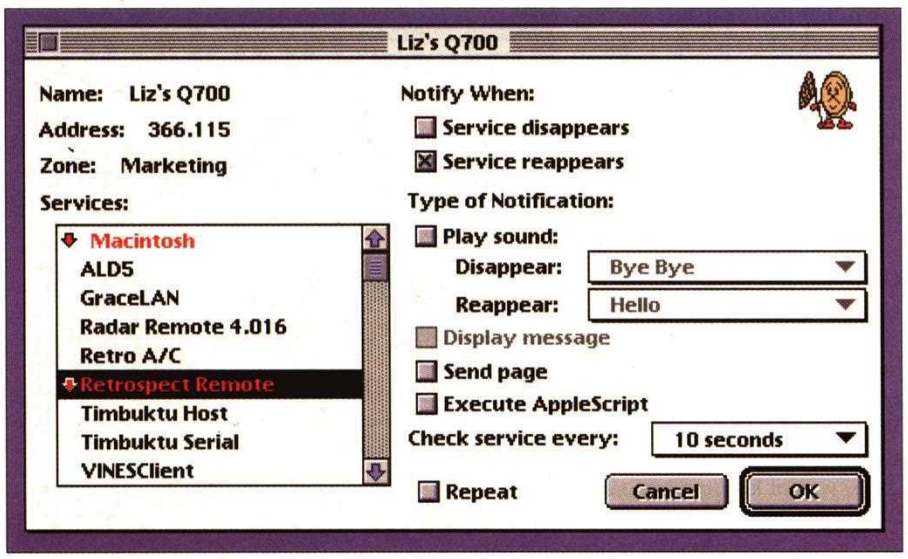
When we reviewed NetWatchman 1.0 in 1991, we were impressed with both its simplicity and performance. We are pleased to see that NetWatchman 2.2 has retained its consummate ease of use despite the addition of new features and functions.

Part of the program's elegance is its simple approach to network monitoring. In essence, what it does is constantly poll your network for the appearance or disappearance of registered AppleTalk zones, nodes and services. The early-warning system is based on alerts that you specify at either a global-, node- or service-class level.

You can create alerts for any element on your network that NetWatchman is monitoring. Global alerts inform you of changes to your overall network configuration, such as the addition of or changes to any zones, nodes or services. Node alerts are more specific, warning you of the appearance or disappearance of a node or any services on that node. Finally, service alerts are geared for monitoring a specific class of service (such as a file or mail server) in any zone monitored by NetWatchman.

Alerts can be triggered when any of the

See NetWatchman, next page



This simple dialog lets you create alerts in NetWatchman that will warn you about network problems. Whether you are creating a global, node or service alert, your options remain virtually the same, making this utility very easy to use.

NetWatchman *From previous page*

monitored objects appear or disappear from your network. When the alert is triggered, NetWatchman can use any or all of the notification options you specify, including playing a sound, displaying a message, sending a page or executing an AppleScript script.

You can specify different sounds to indicate the appearance or disappearance of a monitored object. Paging requires the presence of a third-party network paging server; NetWatchman 2.2 supports Ex Machina Inc.'s Notify! and Caravelle's Pager Pro servers.

Using AppleScript

What excites us most about NetWatchman 2.2 is the incorporation of AppleScript. This adds a whole new dimension to the program, as it opens up a number of new notification and monitoring options and allows you to automate your responses to certain problems on the network. For example, if a service or node disappears, an alert can be passed to an AppleScript script, which could then automatically send an e-mail message via a scriptable mail client such as Qualcomm Inc.'s Eudora, log the event in a Claris Corp. FileMaker Pro database or add it to a graph of network events using Microsoft Excel.

As more and more applications incorporate AppleScript support, the opportunities for extending NetWatchman's capabilities will increase. As we see it, all it takes is someone with some scripting savvy and imagination.

Documentation and support

The AG Group revised the NetWatchman documentation when Version 2 was released but did not update it again for the new features of Version 2.2. Fortunately, a comprehensive AppleScript sample is included with the update to help illustrate the syntax and data that are passed from NetWatchman to a script.

As always, we found The AG Group's technical support to be prompt and attentive. We did come across one problem when specifying an AppleScript file that would cause the program to hang, but technical support quickly provided us with an updated version that corrected the problem.

Conclusions

Network-management tools are still not the panacea that many vendors may have you believe. However, they can be an invaluable resource to the overburdened network manager by offloading some of the more mundane tasks, such as watching your network and waiting for a problem to occur.

For AppleTalk-only networks, or multiprotocol networks with a significant number of AppleTalk devices, you will not find an easier product to use than NetWatchman 2.2. With this utility, network managers can free themselves from monitoring their networks yet be sure that they will be the first ones to know about problems when they occur.

You can easily run the program on an older Mac you were thinking of retiring, and, at its low cost, it will pay for itself in a very short period of time.

Integrating AppleScript and other scriptable applications with NetWatchman requires a bit more skill, but the payoff can be huge for the broadened opportunities for logging, reporting and notification.

Upgrades from Version 2.1 are free. Upgrades from previous versions are $50.

The AG Group Inc. of Walnut Creek, Calif., can be reached at (510) 937-7900 or (800) 466-2447; fax (510) 937-2479; info@aggroup.com. — *By Jonathan A. Oski*

HyperTape

APS QIC tape drive delivers good performance, low price

Overall value ◆◆◆◆

APS Technologies is hoping that the long-standing trend against tape in the Macintosh market will turn with HyperTape, a quarter-inch cartridge (QIC) tape drive that can store up to 2 Gbytes of uncompressed data — 4 Gbytes compressed — per tape. At $499.95, HyperTape is one of the first Mac-based drives that cracks the $500 price barrier, with performance that equals or betters comparable DAT drives that cost from $300 to $500 more.

The basics

HyperTape ships with a 25- to 50-pin SCSI cable, power cable and Dantz Development Corp.'s Retrospect 2.1 backup and archiving software. Like most of APS' external SCSI drives, HyperTape comes with DaTerm (digital active termination) built in. DaTerm is similar to APS' external SCSI Sentry terminator, which we've found helpful over the past two years in minimizing SCSI bus problems.

To keep the cost of the drive under $500, APS doesn't ship either a tape or a cleaning cartridge with HyperTape, but it would be nice if the company included at least one tape with the box. The QIC-Wide tapes range in price from $32 to $35, depending on the volume purchased, and are readily available from APS and other suppliers. A cleaning cartridge is also available from APS for $29.95, and anyone using HyperTape on a regular basis should invest in one. One nice advantage of the tape drive is that cartridges come preformatted — there's no need to waste a day formatting tapes.

Setting up HyperTape is easy. To use the DaTerm feature, you'll need to place HyperTape at the end of the SCSI chain.

Retrospect is the premier backup program for the Mac, and we've covered it in detail in the past (see MacWEEK, April 12, 1993, Page 49). APS includes a single-user version of Retrospect with HyperTape, but multi-user packs for remote workstation backups are also available.

Performance

APS claims transfer rates of up to 30 Mbytes per minute for HyperTape, but results will vary depending on the type of Mac and the type of SCSI bus used.

We clocked our HyperTape at 26 Mbytes per minute on both a Power Mac 9500/132 and a Quadra 840AV, which is as fast as any Digital Data Storage-2 DAT drive we've tested at this level. With a SCSI NuBus or PCI card hooked to HyperTape, we would expect to see rates closing in on 30 Mbytes per minute.

Because HyperTape doesn't have built-in compression, you'll have to use Retrospect's software compression to get up to 4 Gbytes of data on a tape. Performance with compression will vary widely, but you'll see the best speeds with the Power Macs and the Quadra 840AV, which have the horsepower to compress data quickly. With compression turned on, we were able to back up three drives with a combined capacity of 3.2 Gbytes on a single tape.

Conclusions

Tape archival has never achieved the critical mass on the Mac platform that it has on the Intel-standard side. This is largely because of Mac users' wide acceptance early on of magneto-optical and SyQuest technology, but the traditionally higher price of Mac-based tape solutions has also limited tape's success on the Mac.

With HyperTape, APS has done an admirable job of delivering a well-performing tape drive at a low price. A number of other storage vendors have also announced similar tape drives at comparable prices, but APS has a reputation for excellent service (HyperTape comes with a two-year warranty and a 30-day money-back guarantee) and low prices that will make HyperTape hard to beat.

APS Technologies of Kansas City, Mo., is at (816) 483-6100 or (800) 235-2753; fax (816) 483-3077. — *By Rick LePage*

reviews FORUM

GeoPort/MegaPhone will work with flip of a switch

In your review of Apple's new GeoPort Telecom Adapter kit with Cypress Research Inc.'s MegaPhone 1.0 (MacWEEK May 22, Page 1), you neglected to mention a couple of important points. First, MegaPhone does not support Caller ID. Second, to use the phone software, you have to set the sound input of the Sound control panel to Microphone, which locks out the capability to hear sound from audio or multimedia CDs and from Apple's Video Monitor. For multimedia professionals and others who want to listen to music while they work, this limitation is a real pain because you must constantly adjust the Sound control panel if you also want to use the phone. In my opinion, these limitations make the cool idea of computer-telephone integration of very limited use in practical situations.

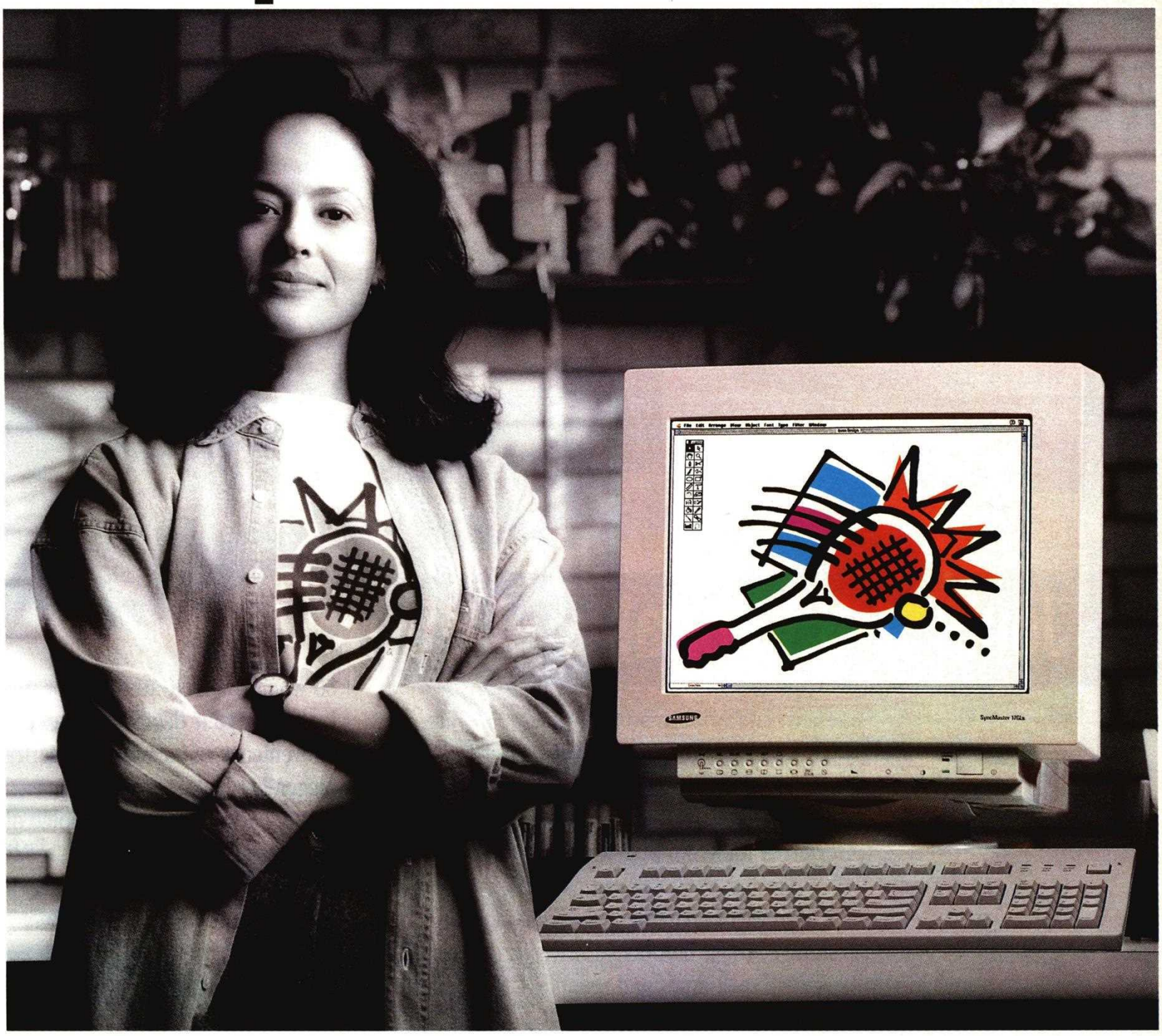
M.C. Schraefel
Sign Works Studio
Victoria, British Columbia

MacWEEK replies:

You are correct: The GeoPort software does not support Caller ID. According to Apple representatives, the company plans to support this feature in a future version. Unfortunately, because some states don't currently permit Caller ID, many users may not be able to take advantage of it anyway. Regarding the audio input, if you set the audio input to audio CD, the GeoPort/MegaPhone combination will automatically switch to the microphone input to place and receive calls and then switch back when the call is complete.

Send your comments to MacWEEK Reviews Department, 301 Howard St., 15th Floor, San Francisco, Calif. 94105; fax (415) 243-3602. Include your name, address and phone number. We reserve the right to edit for clarity and length.

Samsung.
Mac's new point of view.



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Power Management	•	•	•	•
Flat Square Screen		•	•	•
On-Screen Programming			•	•
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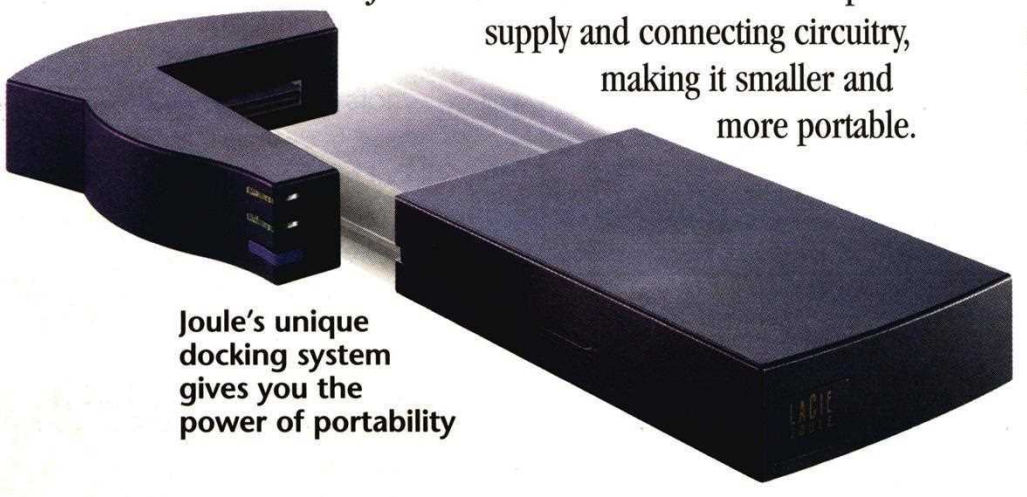

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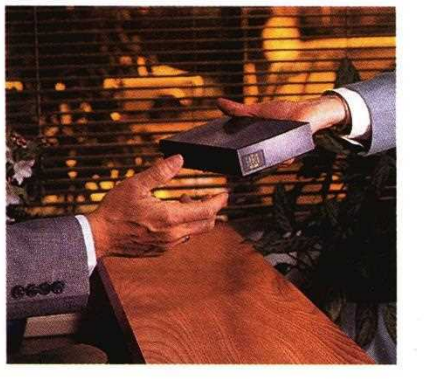

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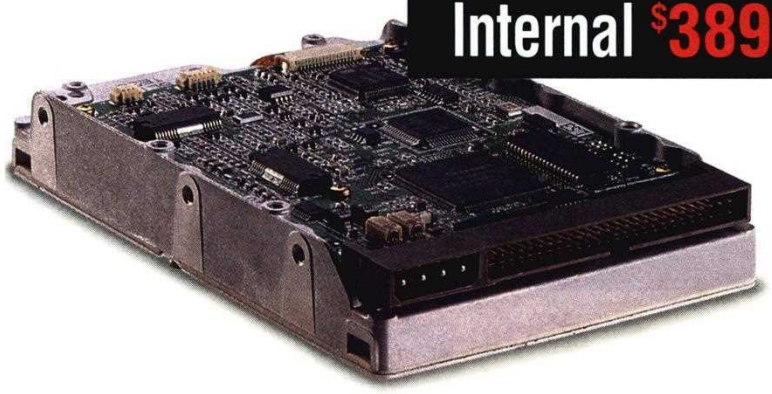

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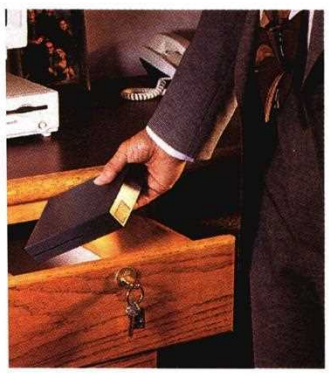

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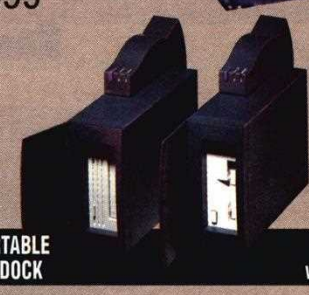

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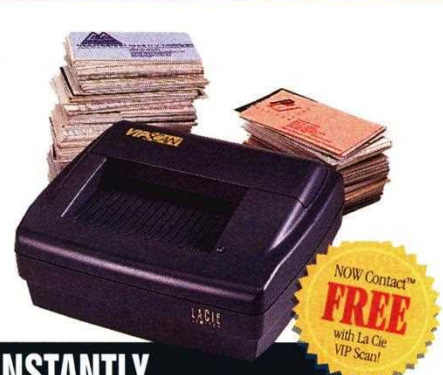

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READ ON

For more on the perils of producing video in-house, check out the GA Extra, June 5, Page 14.

DIGITAL VIDEO

Macs top choice for video editing

By Jeff Ubois

The Macintosh remains the top choice for digital video editors, and over the past year more than half a dozen new products that offer broadcast-quality video have entered the market. These systems are built around high-end AV or Power Macs, video capture and playback cards, large disk arrays, extra RAM, and editing software.

Pricing for video-editing systems can seem like either a bargain or a rip-off.

Turnkey systems start at around $40,000 and include ImMIX Inc.'s TurboCube, Grass Valley Group Inc.'s Video Desktop Personal Production Suite and Avid Technology Inc.'s Media Composer. Other packages — Avid's Media Suite Pro, Data Translation Inc.'s Media 100, Radius Inc.'s VideoVision Telecast and Truevision's Targa 2000, ranging in price from $5,495 to $15,845 — need some assembly and are essentially NuBus cards with software.

The new PCI Macs should spur a new generation of digital video systems later this year, which will take advantage of PCI's better throughput (see story, Page 10).

Making meaningful comparisons between these systems is somewhat tricky because each vendor offers different performance metrics. Even when buying turnkey solutions from Avid and ImMIX, the price for video-editing systems varies according to selected options — hard drive and RAM capacity in particular. With a few megabytes of memory here and different software, output, titling and other add-ons there, it's possible to make any system look like either a bargain or a rip-off compared with the others.

Digital video-editing systems

COMPANY	PRODUCT	PRICE
AVID TECHNOLOGY INC. Tewksbury, Mass. (508) 640-6789 or (800) 949-2843; fax (508) 640-1366; info@avid.com	**Media Suite Pro** **Media Composer 800** **Media Composer 900** **Media Composer 1000** **Media Composer 400S**	$7,995 $44,900 $39,900 $52,900 $17,995
DATA TRANSLATION INC. Marlboro, Mass. (508) 460-1600; fax (508) 481-8627; m100ts@aol.com	**Media 100**	$8,995
GRASS VALLEY GROUP INC. Grass Valley, Calif. (916) 478-3000 or (800) 704-8843; fax (916) 478-3181	**Grass Valley Video Desktop Personal Production Suite**	$42,900 (through Aug. 31; regular price $48,900)
IMMIX INC. Grass Valley, Calif. (916) 272-9800; fax (916) 272-9801	**TurboCube** **VideoCube**	$56,000 $42,500
RADIUS INC. Sunnyvale, Calif. (408) 541-6100 or (800) 227-2795; fax (408) 541-6150; support@radius.com	**VideoVision Telecast** **VideoVision Studio 2.0**	$15,845 $4,849
TRUEVISION Santa Clara, Calif. (408) 562-4200 or (800) 729-2656; fax (408) 562-4065; info@truevision.com	**Targa 2000** **Targa 2000 Pro**	$5,495 $7,995

JAMIE TANAKA

Ming Lau, president of Blue Waters Production, says there are two types of digital video-editing systems: the ones for editing and the ones for image creation.

Moreover, to get the most out of any desktop video-editing system, most users need additional third-party software, such as Premiere or After Effects from Adobe Systems Inc. of Mountain View, Calif.; Inifini-D from Specular International Ltd. of Amherst, Mass.; ElectricImage Animation System from Electric Image Inc. of Pasadena, Calif.; and Macromedia Director from Macromedia Inc. of San Francisco.

According to Ming Lau, president of Blue Waters Production Inc., a digital video production house based in San Francisco, there are two kinds of systems: the ones for editing and the ones for image creation. "There's a parallel with desktop publishing," he said, where you may edit in QuarkXPress or Adobe PageMaker and do image creation in Adobe Illustrator and Photoshop.

Which type of product makes sense depends on the intended tasks. "In editing, you're thinking about everything from point of view of the clip, and Avid and ImMIX have done a good job of handling those issues — they are primarily nonlinear editing systems, not image-creation tools, and for that you don't need much but timecodes and ways to manage multiple video streams," Lau said.

There is some loss of flexibility with the turnkey systems, however. "If you go to a proprietary system, your storage is locked to their standard, and you pay a premium for that," Lau said.

Users willing to get more involved with the computer technology have more options. "If you are in image creation, or if you are an independent producer where cost is an issue, you should explore the off-the-shelf software like After Effects and Premiere because they cost a lot less," Lau said. "In the $10,000 range you can have enough capacity to produce a half-hour video, and for $15,000 you can have a system with an editing level that is similar to the Avid turnkey systems."

A distinction should also be made between systems that use proprietary video formats and those that use QuickTime. While the proprietary video format systems, such as the ImMIX, Avid and Data Translation products, can accept QuickTime input and output, the QuickTime-based systems, such as those from Radius and Truevision, work more smoothly with third-party software packages, Lau said.

All desktop video products make tradeoffs between image quality and compression ratios. While high-speed streams of data offer the best-quality video, they can quickly fill even large hard drives and are not appropriate for media such as CD-ROMs, which are restricted to 300 Kbps for double-speed drives. The ideal is the combination of high-quality video with high compression ratios. Image quality at a given compression ratio is a good benchmark to use in selecting a system.

Restoring creativity

Avid has two primary sets of Mac products, the high-end Media Composer line, which consists of turnkey systems, and the Media Suite Pro.

"These systems rejuvenate your creativity as an editor and allow project flexibility you never had before," said Mark Anderson of Digital Production Services Inc. in Seattle, who is using two Avid Media Composers and two Media Suite

See Solutions, next page

MACINTOUCH RIC FORD

The Internet is changing the world — and Apple

We are entering a very interesting period for the Macintosh. The first clones have gone out the door. The second generation of Power Macs is in stores. And Apple is trying to get its Internet act together before it misses the biggest train ever.

I just sold my Power Mac 7100/66 to a friend for $1,000 less than I paid for it a year ago. It would be nice to wait a few months for Apple to iron out any hardware bugs in the PCI Macs and to evaluate second-generation clones, but I have a good case for picking up one of Apple's new machines soon after the rest of the set arrives next month.

The 9500 brought us Open Transport 1.0, but it's not really all there yet.

Open Transport is a big part of this picture. The Internet is changing the world, tugging the MacInTouch Web site and other projects with it. In this context, early reports about the Power Mac 9500 and Open Transport are especially interesting. The new hardware's performance looks excellent, but critical software is lagging behind.

Transport time

Apple shipped the Power Mac 9500 with Open Transport 1.0, a version that is unsupported on all other Macs. Updates later this year are planned to cover existing 680x0- and PowerPC-based Macs. Sometime later, Open Transport is supposed to support dial-up AppleTalk and TCP/IP networking over Point-to-Point Protocol (PPP), as well as Novell NetWare, X.25, DECnet and other protocols.

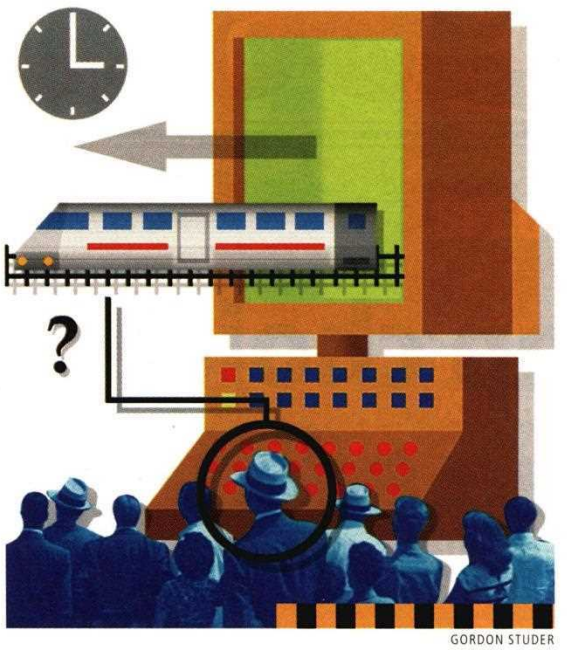
Also in the future is the realization of much of Open Transport's performance potential, which depends on additional development by Apple and by third parties. This may not happen quickly.

MacTCP 2.0.6, which runs on previous Macs, is not supported by and must not be installed on the PCI Macs. Open Transport's new TCP/IP control panel replaces the old MacTCP control panel in the System folder and improves the user interface.

Free PPP

Shortly after the 9500 introduction, Apple delivered an Open Transport 1.0.1 patcher via on-line services. The patcher addresses a problem that trashes ("truncates") network data in certain situations, and it fixes a few problems for third-party PPP and Serial Line Internet Protocol (SLIP) software. Other problems remain, however, and Apple does not yet offer any PPP or SLIP support of its own.

MacPPP 2.0.1, a freeware package that



GORDON STUDER

provides PPP support on top of MacTCP, is a standard for Mac users dialing into the Internet. Programmer Steve Dagley modified MacPPP to support the higher port speeds possible on GeoPort-equipped Macs, recently releasing an update called MacPPP 2.1.1SD.

The arrival of the Power Mac 9500 and Open Transport triggered a flurry of problem reports from PPP users, and Dagley and others have been struggling to find work-arounds. The documentation for MacPPP 2.1.1SD includes some good information about Open Transport and several other compatibility issues, and Dagley may release new material by the time you read this.

Open Transport apparently has problems when the PPP server address is not in the same "subnet" with the Mac. Possible work-arounds include changing the subnet mask in Open Transport's TCP/IP control panel to 255.255.0.0 (assuming a typical Class C address) or changing the Router address in the control panel to the address of the router to which your PPP server is connected.

Customers in eWorld's Ask Apple area began developing work-arounds when Apple punted their questions. User "Mlp" could not use PPP on the 9500 at all but eventually figured out a successful procedure after applying the Open Transport 1.0.1 patch and installing MacPPP 2.1.1SD.

In the TCP/IP control panel, select Configure Manually. Leave the IP address blank (to be supplied by the PPP server). Enter domain name (e.g. xyz.com). Leave subnet mask blank (or try 255.255.0.0). Your Internet provider should be able to give you the PPP server's router address and the IP address for the name server. (The name server address would be the same as the one in MacTCP 2.0.6.)

You can get MacPPP 2.1.1SD from standard on-line file libraries. Steve Dagley's mailbox is sdagley@iu.net.

In a similar issue, Apple's troublesome GeoPort Express Modem software is incompatible with the Power Mac 9500. A new version, Apple Telecom 2.1, is supposed to address the compatibility problems later this summer and work with current GeoPort Adapter pods. Don't count on running faster than the current 14.4 Kbps, though. □

Comments on MacInTouch are welcome at (508) 897-2621. Please address e-mail to 72511,44 on CompuServe or ricford@macintouch.com on the Internet. The MacInTouch home page is at http://www.macintouch.com/~ricford/.

SOLUTIONS

From previous page

Pros to produce commercial videos.

The Media Composer products are based on the Power Mac. The low end of the Composer series offers off-line systems for creating rough cuts of video programs; at the high end, Composers offer on-line editing with real time 3-D video effects. Avid plans to offer its own Power Mac system based on an Apple 8100/100 motherboard for the Media Composer (see MacWEEK, July 10, Page 1).

Media Suite Pro is a software-and-board combination that lets users print finished videos directly to videotape and CD or create edit-decision lists that can be used in traditional on-line video-editing suites.

For Anderson, the Avid systems' flexibility has been critical in pleasing clients. "I did a piece for a public relations firm that was approved by a number of people," he said. "Then it hit the headquarters of the company, and they wanted one word taken out of the middle of the piece that had music underneath. That is difficult with traditional video-editing tools, but it took me 60 seconds on the Composer."

In addition to the technical merits of their systems, most users are also quick to emphasize the low cost of Mac-based systems when compared with traditional video-editing products.

"We had approval to buy a $40,000 character generator and another Betacam deck for the edit suite, and I said, 'There is a better way to spend this money,' " said Wayne Abler, senior producer/director at Snap-on Inc. of Kenosha, Wis. "We bought a Media 100 with 12 gigs of disk storage that gave us character-generation capabilities that are almost as good as the dedicated box, plus Betacam SP-quality editing."

Quality image

Data Translation's Media 100 is another software-and-card combination that provides broadcast-quality video and nonlinear editing. It inputs and outputs component, composite and S-video with image quality of up to 150 Kbytes per NTSC frame. The new Version 2.0 software runs native on the Power Mac or on the Quadra 840AV and requires a minimum of 48 Mbytes of RAM. A $3,995 Power Option provides additional fast effects and lets users edit highly compressed videos in draft mode, automatically switching to high quality video for the final cut. This lets editors work more hours of video without consuming more disk space.

For Abler, the quality of the final productions has been amazingly good. "I took source tapes, digitized them, edited a program on the Media 100, brought it back and used the edit-decision list with the same source tapes on our component beta suite," he said. "Then I ran the two side by side with a white bar down the middle of the screen. It was hard to tell the difference."

The ImMIX turnkey products consist of a Mac that controls a dedicated video processor and a mixing system. For Jerry Waddell, president of Video Ideas Production Inc. of Chatanooga, Tenn., the simplicity the ImMIX system offers is important.

"ImMIX sells a turnkey system — you hook up a deck and start digitizing," Waddell said. The ImMIX's faster effects, such as wipes and peels, have reduced editing time dramatically. "We had a client on the Avid with a job that took four hours in editing and six hours to render," Waddell said. "He came in and did the same thing in one and a half hours on our ImMIX."

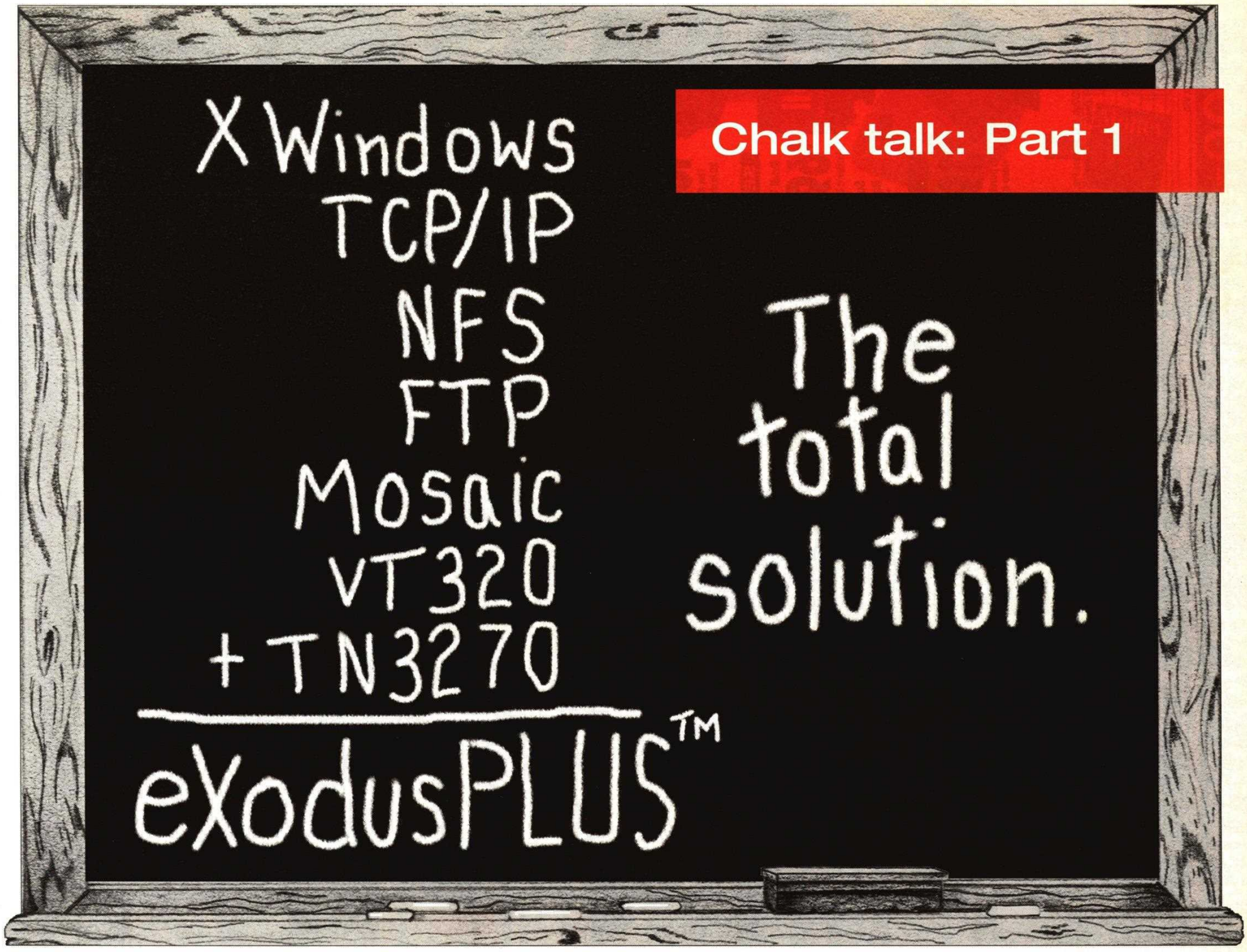
True visions

The Radius and Truevision NuBus editing suites stand out for their native QuickTime compatibility, which gives them an edge in working with third-party software and in developing digital videos in the QuickTime format for CD-ROM.

Radius' VideoVision is one of the most established systems on the market, with more than 15,000 of its VideoVision Studio cards shipped. The company recently introduced the VideoVision Telecast, which works with the Studio card as a breakout box and provides a set of professional video capabilities.

In addition to providing component video and SMPTE timecodes, the Telecast fixes VideoVision Studio's problems with synchronized audio and will come bundled with Radius Edit.

Truevision's Targa 2000 handles 24-bit video and can output 60 fields per second NTSC video at 640 by 480 pixels as well as DAT-quality stereo auditing recording and playback. An optional second NuBus card offered as part of the Targa 2000 Pro system (which costs $2,500 more than the Targa 2000) offers component Betacam SP, YPrPb and RGB video. "The big advantage of the Targa is it is a third-generation board, one generation ahead of everything else," Lau said. "We found the Targa offered picture quality that was twice as good or a data rate that was half the speed with the same quality as other products." □



Chalk talk: Part 1

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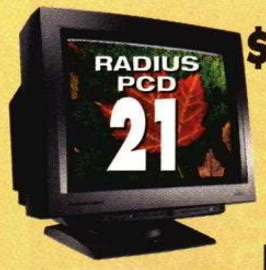

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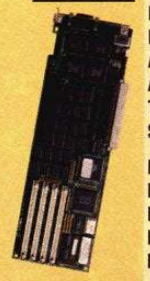

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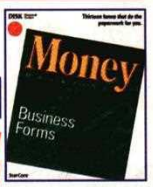
- Manage information, stay in touch with people, and exchange data with your computer
- Send or receive electronic mail, send a fax or "beam" to another Newton MessagePad
- Newton™ Recognition Architecture recognizes both printed and cursive handwriting
- Built-in applications that include a notepad, to-do list, datebook, and name file
- Features a fast 20 MHz Processor, improved 4mb ROM and 640K RAM.

$159.95

A102 1211

Now Bundled with Money Magazine Business Forms



$27.95 value!

Absolutely FREE!

MONITORS & GRAPHIC CARDS

21" MultiSync XE21

- 21" diagonal flat square technology
- 13.8" Viewable image size
- Mac Res:
  640 x 480 NI
  1024 x 768 NI
- Fine 0.28mm dot pitch
- Monitor Manager
- AccuColor, Digital controls
- Energy star compliant for true energy savings

3 YEAR WARRANTY

$1829

21" Monitor

21" XE21 (N026 1010) $1829
21" XP21 (N026 1011) 2199

15" MultiSync XV15

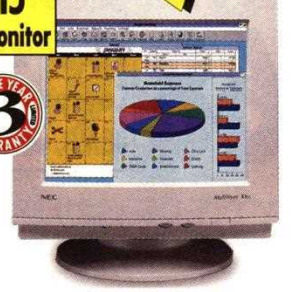
Outstanding performance at an affordable price

- Larger sharper images that are easier to use
- Plug and Polay compatible for real performance advantages
- Energy star compliant for true energy savings
- 15" diagonal flat square technology
- 13.8" Viewable image size
- Mac Res: 1024 x 768 NI
- Fine 0.28mm dot pitch

3 YEAR WARRANTY

$435

15" Monitor



14" XV14 (N026 1016) $319
15" XV15 (N026 1015) $435
15" XE15 (N026 1006) $549
15" XP15 (N026 1005) 599

17" MultiSync XV17

Large Screen performance at an affordable price

NEC

3 YEAR WARRANTY

- Perfect entry level business, small office/home office, home ducation/entertainment
- 17" diagonal flat square technology
- 15.6" Viewable image size
- Mac Res: 1024 x 768 NI
- PC Res: 1280 x 1024 NI
- Fine 0.28mm dot pitch
- FullScan capability
- On-Screen Manager

$759

17" Monitor

GREAT DEAL

17" XV17 (N026 1022) $759
17" XP17 (N026 1009) 1049

IntelliColor Display/20e

The Radius IntelliColor Display/20e is part of the next generation in professional two-page color displays. It delivers unrivaled command of your desktop, from on-the-fly resolution switching to state-of-the-art color temperature control. Combined with Radius' IntelliColor software, it allows you to emulate 3 lighting conditions and user-adjustable color temperature, so you get more accurate color representation.

$1979

MONITORS

R016 1013 **PressView 21T Display System** (PV2102) 21" Trinitron, 640 x 480 to 1600 x 1200 ..... $3129
R016 1016 **SuperMatch 21•T XL Trinitron** (STD2102) 21" Trinitron, 1600 x 1200 ..... $2139
R016 1009 **IntelliColor Display/20e** (0461) 20" Trinitron, 640 x 480 to 1600 x 1200 ..... $1979
R016 1007 **PrecisionColor Display/17** (0460) 17" Trinitron, 640 x 480 to 1600 x 1200 ..... $959
R016 1030 **PrecisionView 17** (RD1705) 17" Trinitron, 1024 x 769 ..... $899

VideoVision Studio 2.0

With JPEG hardware compression and decompression for full-screen, full-motion recording and playback from a hard disk, VideoVision Studio combines the power and flexibility of the Macintosh with the ease and transportability of video tape.

R013 1018 **VideoVision Studio 2.0** (0500) Compatible with the PowerMac 8100 ..... $3699
R013 1020 **VideoVision Studio 2.0** Upgrade (0505) JPEG daughtercard $1759
R013 1026 **SpigotPower AV** (DV1630) Captures full-screen 24-bit color video up to 30 frames/60 fields per sec $759
R013 1065 **SpigotPro AV** (0514) captures full-screen 24-bit color video up to 30 frames/60 fields per sec $1249

PowerMac 8100 Compatible!

$3699

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Super Resolution at Earth-Shaking Speed.

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Thunder Series Cards Blow the doors off Power Mac

as low as $759

FREE* ColorComposer software

Adobe charged

Three Thunder IV GX cards extend the 24-bit resolution of the PowerMac's built-in-video. Accelerated 24-bit color, built-in Photoshop acceleration, CMYK acceleration, hot-key resolution switching, pan and zoom, color composer and 10-bit DAC add up to make these cards the number one choice for image processing, compositing and illustration.

Quadra 9500 Compatible PCI Cards

NEW PRODUCT

R013 1069 **PrecisionColor 8/1600** (0529) 8-bit support to 1600 x 1200 ..... $479
R013 1071 **Thunder 30/1600** (0528) 24-bit support to 1600 x 1200 ..... $1149
R013 1070 **Thunder 30/1152** (0538) 24-bit support 1152 x 870 ..... $759
R013 1073 **ThunderColor 30/1600** (0530) 24-bit support to 1600 x 1200 ..... $1999
R013 1072 **ThunderColor 30/1152** (0531) 24-bit support 1152 x 870 ..... $1599

R013 1059 **Thunder IV GX•1600** (0513) 24-bit support to 1600 x 1200 ..... $2799
R013 1060 **Thunder IV GX•1360** (0446) 24-bit support to 1360 x 1024 ..... $2289
R013 1061 **Thunder IV GX•1152** (0485) 24-bit support 1152 x 870 ..... $1899
R013 1062 **Thunder/24 GT** (0491) 24-bit support to 1152 x 870, PhotoEngine optional $1329
R013 1008 **PrecisionColor Pro 24X** (0429) 24-bit color, 640 x 480 to 1152 x 870, 13" to 21" displays $1059
R013 1010 **PrecisionColor Pro 24XK** (0430) 24-bit color, 1024 x 768, 16" and larger displays $749

*For a limited time, FREE ColorComposer software is included with each Thunder Series card.

PRINTERS & SCANNERS

EPSON

Epson ES-1200 Pro Mac Scanning System

$1269

HIGH DETAIL 4800 DPI, 30-BIT COLOR SCANNING MADE AFFORDABLE.

- 600 x 1200 dpi scanning resolution (up to 4800 dpi via interpolation)
- Epson's TruePass scanning technology
- Scans over ONE BILLION colors
- 8.5" x 11.67" scanning area
- Built-in image processing features
- Increased image quality with 30-bit color scanning

2 YEAR WARRANTY

MACUSER EDITORS' CHOICE 1994 WINNER

E045 1003 **Epson ES-1200C Pro-MAC** $1269
E045 1004 **Transparency Unit** $655
E045 1008 **Automatic Document Feeder** $465

EPSON Stylus COLOR Inkjet Printer

E047 1012

Now you can print in vivid color with clarity never before possible in a personal color printer. At 360 dpi resolution blacks are blacker and at 720/360 dpi the color output is the sharpest available.

- Incredible 720 dpi color printing, optimized with special coated paper
- 360 dpi black print resolution
- Prints up to 16 million colors
- Serial interface
- Includes Mac driver software and a TWO Year Warranty

MACUSER EDITORS' CHOICE 1994 FINALIST

MACWORLD ★★★★

$529

ACCELERATORS

DAYSTAR DIGITAL

100 MHz Turbo 601

100MHz

$1539

Compatible with Mac IIci, IIsi, IIvx, and Performa 600

The Turbo 601 provides the best of both worlds. The Turbo 601 allows you to run your current software up to twice as fast, and it lets your run powerPC accellerated applications at full PowerPC speed - from 7 to 11 times faster!

DayStar 100 MHz Turbo 601 ..... $1539
Compatible with Mac IIci (D040 1048), IIsi (D040 1050), IIvx/vi/Performa 600 (D040 1052)
DayStar 100 MHz PowerPro 601 (D040 1043) $1539
Compatible with Quadra 900/950, 700 and other with Quadra style PDS
DayStar 66 MHz Turbo 601 ..... $989
Compatible with Mac IIci (D040 1039), IIsi (D040 1049), IIvx/vi/Performa 600 (D040 1051)
DayStar 66 MHz PowerCard 601 (D040 1040) $635
DayStar Turbo '040 (D040 1018) $769

PAPERPORT

FAST MAC V.34 FAX AND DATA MODEM

NEW! *FAST MAC V.34* 28.8Kbps External MODEM. 28.8Kbps data modem/14.4Kbps Fax modem with V.42bis/MNP5. Fax and data software and cable for the Macintosh, on-line services, power adapter and telephone cable included.

$139

NEW PRODUCT

B030 1007

$359

VISIONEER

PAPERPORT

The fastest way to get paper into your Mac.

If it's on paper, it's PaperPort-able!

MACWORLD ★★★★★

The simple, super-small input device that converts your paper documents into electronic ones. With PaperPort's direct links to word processors, OCR software (included!), printers and fax modems, you can file, edit, annotate, print and send your documents directly to others. (V025 1002)

MACUSER EDITORS' CHOICE 1994 FINALIST

WARRANTIES: All items manufactured by ClubMac are returned to ClubMac for warranty repair. All other items carry manufacturer's warranty. **MONEY BACK GUARANTEE:** All products manufactured by ClubMac carry a 30 day money back guarantee. ClubMac extends all other manufacturers' return policies to its customers. Non-ClubMac products carry 30 day money back guarantee when specified. **RETURNS:** Call for RMA number! Any product that is returned WITHOUT an RMA number will be refused. ALL PRODUCT INFORMATION AND PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE. NOT RESPONSIBLE FOR TYPOGRAPHICAL ERRORS.

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Once again, the first 1000 ClubMac SyQuest 200MB External SubSystems sold will include TWO 200MB Genuine SyQuest cartridges. **OVER A $75.00 SAVINGS!**

TWO FREE CARTRIDGES LIMITED SUPPLY

ClubMac 5.25" 200MB Removable

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C109 1090

Read, Write and FORMAT Compatible with 200MB, 88MB, and 44MB Cartridges.

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MacUser ★★★★ February 1995

SyQuest 5 YEAR Warranty* ON CARTRIDGES

GENUINE SYQUEST CARTRIDGES

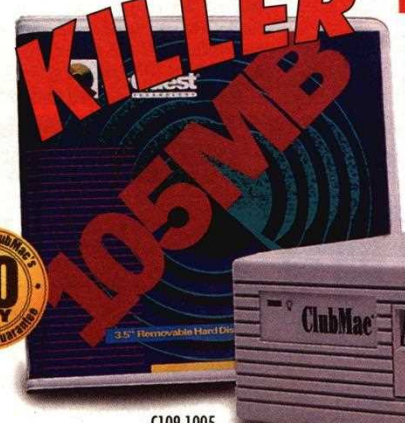
Part Number	Media	Qty 1	Qty 10	Qty 20
S198 1010	44MB	$43ea	$42ea	$41ea
S198 1011	88MB	$48ea	$47ea	$46ea
S198 1012	200MB	$76ea	$74ea	$72ea
S198 1013	105MB	$51ea	$50ea	$49ea
S198 1014	270MB	$62ea	$61ea	$60ea

* Warranty after first year, handled by SyQuest.

C109 1002 **5.25" ClubMac 88MB** *includes FREE Formatted 88MB Cartridge* **$349**

While Supplies Last!

ZIP KILLER 105MB



105MB

ClubMac 3.5" 105MB Removable

$199

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C109 1005

FREE CARTRIDGE

- Fast 14.5ms average seek time
- 3,600 RPM rotational speed
- Data transfer rate up to 4MB/sec (sync)
- 105 Cartridge is compatible with 270 SyQuest Drive
- IN STOCK NOW!

C109 1005 **3.5" ClubMac 105MB** *includes FREE Formatted 105MB Cartridge* **$199**

C109 1004 **3.5" ClubMac 270MB** *includes FREE Formatted 270MB Cartridge* **$468**

All SyQuest drives include SCSI Director formatting software, ONE FREE Formatted Cartridge, necessary cables for "plug-and-play" and documentation. All SyQuest drives include a 30-Day Money Back Guarantee and TWO Year Warranty. All SyQuest cartridges include a FIVE Year Warranty (warranty after the first year is handled by SyQuest).

DAT AND OPTICAL STORAGE DEVICES

ClubMac Tape Backup Drives

BUNDLED WITH Retrospect v2.1 Backup Software

C109 5011

$699

Backed by ClubMac's 30 DAY Money Back Guarantee

2.0GB

NOW SHIPPING WITH ACTIVE TERMINATION

4.0GB

$899

C109 5010

FREE DAT TAPE

TWO Year Warranty

Verbatim

SONY

DAT MEDIA

V010 1018	Verbatim 90M Cartridge	$12
S100 1012	Sony 90M Cartridge	$12
V010 1043	Verbatim 120M Cartridge	$29
S104 1008	Sony 120M Cartridge	$29

OPTICAL MEDIA

V010 1021	Verbatim 1.3GB Optical Cartridge	$85
S100 1005	Sony 1.3GB Optical Cartridge	$85
V010 1043	Verbatim 230MB Optical Cartridge	$39
S104 1008	Sony 230MB Optical Cartridge	$39

ClubMac 5.25" OLYMPUS 1.3GB

- 3.5" Olympus Optical Mechanism
- 29ms ave. seek time
- 3,500 RPM rotational speed

1.3GB

$1499

C109 5022

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CLUBMAC 3.5" OLYMPUS 230MB

- 3.5" Olympus Optical Mechanism
- 28ms ave. seek time
- 4,200 RPM rotational speed

230MB

C109 5020

$579

Backed by ClubMac's 30 DAY Money Back Guarantee

MacUser ★★★★ February 1995

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CLUBMAC HARD DRIVE STORAGE

Internal Grand Prix
C109 1108

$1149

Incredibly Low Price

4.3GB
7200 RPM

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Quantum

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C109 1202

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365MB

$139
Internal Lightning
C109 1216

1.0GB

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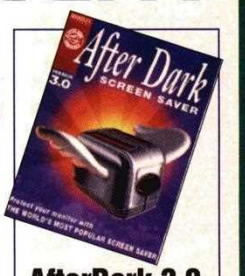


AfterDark 3.0
4 Module Starter Edition
FREE
With the purchase of a Quantum 365 Lightning Drive (Internal or External)

	Part No.	Internal	Part No.	External
1080MB Fireball 12ms	C109 1202	$399	C109 1203	$459
2200MB Capella 8.5ms	C109 1213	$799	C109 1212	$859
4300MB Grand Prix 8.6ms	C109 1159	$1149	C109 1108	$1209
4300MB Atlas 8ms	C109 1122	$1499	C109 1121	$1559

	Part No.	Internal	Part No.	External
365MB Lightning 11ms	C109 1216	$139	C109 1214	$199
420MB Trailblazer 14ms	C109 1204	$185	C109 1205	$245
540MB Fireball 12ms	C109 1200	$199	C109 1201	$259
730MB Lightning 11ms	C109 1154	$259	C109 1102	$319

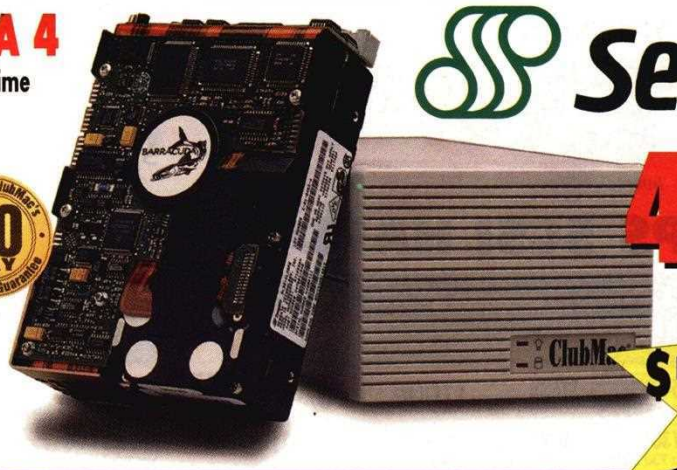
Unformatted Capacity	Model	Description	Part No.	Internal	Part No.	External
3.5" HALF HEIGHT & LOW PROFILE (LP)						
2.4GB	32430N	Hawk 2 LP	C109 2211	$939	C109 2112	$999
4.3GB	15230N	Hawk 4	C109 2212	$1139	C109 2113	$1199
2.5GB	32550N	Barracuda 2 LP	C109 2203	$1069	C109 2109	$1129
4.3GB	15150N	Barracuda 4	C109 2207	$1499	C109 2106	$1559
5.25" FULL HEIGHT						
9.1GB	410800N	Elite-9			C109 2110	$2599

BARRACUDA 4
8.5ms average seek time
7,200 RPM

Seagate 5 YEAR Warranty

Backed by ClubMac's 30 DAY Money Back Guarantee

NOW SHIPPING WITH ACTIVE TERMINATION



Seagate

4.3GB

$1579

CLUBMAC CD-ROM DRIVES

ClubMac 2X CD-ROM

- 300KB/sec data transfer rate
- 350ms average access time
- Flip Top Lid
- LED light
- Headphone jack
- Volume control
- Light weight
- CharisMac's CD AutoCache driver software
- ONE Year Warranty

ClubMac NEW PRODUCT

CD AutoCache PhotoCD

Backed by ClubMac's 30 DAY Money Back Guarantee

$99
C109 9550

ClubMac 4X CD-ROM

- 600KB/sec data transfer rate
- 190ms average access time
- Caddy-less design
- LED light
- Headphone jack and RCA jacks
- CharisMac's CD AutoCache driver software
- ONE Year Warranty

Backed by ClubMac's 30 DAY Money Back Guarantee

CD AutoCache PhotoCD

$229
C109 9546

CD-ROM BUNDLE
- Grolier1995 Multimedia Encyclopedia
- U.S. Atlas & World Atlas
- San Diego Zoo Animals
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CLUBMAC CD-ROM BUNDLE **$100***
C109 1015
*with any CD-ROM Drive purchase

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MACWORLD MW SERVICE HERO

MACWORLD 1993 World Class Award Winner

WOW! ...1GB OF STORAGE!

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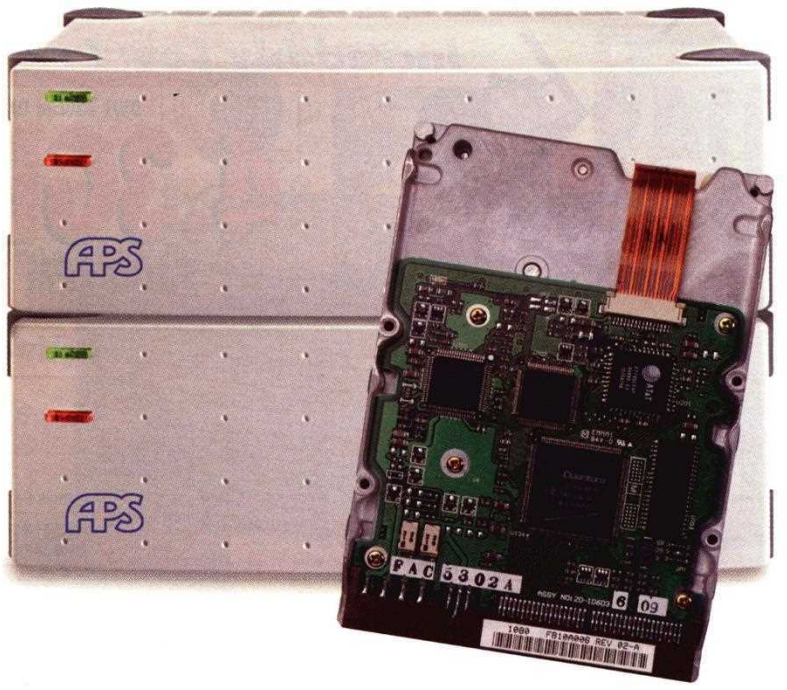
$389.95 WOW!

Internal configuration



APS Q 1080

- ✔ 1GB formatted capacity
- ✔ Average seek time of 9.8 ms and access time of 17 ms
- ✔ 3-year warranty

APS MS 4.0

- ✓ Over 4GB of formatted capacity
- ✓ Average seek time of 6.7 ms and access time of 13 ms
- ✓ 5-year warranty

$1399.95

MacUser ZD LABS ★★★★

Internal configuration

APS Q 730

- ✓ Up to 700MB formatted capacity
- ✓ Average seek time of 11 ms and access time of 20 ms
- ✓ 2-year warranty

$229.95

MacUser ZD LABS ★★★★½

Internal configuration

APS SCSI HARD DRIVES

516-2050MB

	Model	Capacity	Internal	SR2000
MacUser ZD LABS ★★★½	APS Q 540[3] Quantum 540 Fireball mechanism	516MB	$199.95	$299.95
MacUser ZD LABS ★★★★½	APS Q 730[2] Quantum 730 Lightning mechanism	699MB	229.95	299.95
	APS Q 840[3] Quantum 840 Trailblazer mechanism	811MB	299.95	399.95
	APS Q 1080[3] Quantum 1080 Fireball mechanism	1042MB	389.95	489.95
MacUser ZD LABS ★★★½	APS ST 1.0[5] Seagate ST 31230N Hawk mechanism	1010MB	549.95	649.95
MacUser ZD LABS ★★★½	APS Q 1.0[5] Quantum Atlas XP31070 mechanism	1025MB	699.95	799.95
MacUser ZD LABS ★★★½	APS MS 2.0[5] Micropolis 4221 mechanism	1955MB	899.95	999.95
	APS ST 2.0[5] Seagate ST 32550N Barracuda	2047MB	999.95	1099.95
MacUser ZD LABS ★★★★	APS Q 2.0[5] Quantum Atlas XP32150 mechanism	2050MB	999.95	1099.95
	APS MS 2.0AV[5] Micropolis 4221AV mechanism	1955MB	999.95	1099.95

4064-8669MB

	Model	Capacity	Internal	SR2000
MacUser ZD LABS ★★★★	APS MS 4.0[5] Micropolis 3243 mechanism	4064MB	$1399.95	$1499.95
	APS MS 4.0AV[5] Micropolis 3243AV mechanism	4064MB	1499.95	1599.95
MacUser ZD LABS ★★★½	APS ST 4.0[5] Seagate ST 15150N mechanism	4094MB	1499.95	1599.95
	APS Q 4.0[5] Quantum Atlas XP34300 mechanism	4101MB	1399.95	1499.95
	APS MS 9.0[5] Micropolis 1991 mechanism	8669MB	2299.95	*2499.95
	APS MS 9.0AV[5] Micropolis 1991AV mechanism	8669MB	2399.95	*2599.95
MacUser ZD LABS ★★★★	APS ST 9.0[5] Seagate ST410800N mechanism	8669MB	2499.95	*2699.95

PORTABLE DRIVES

	Model	Capacity	Internal	**AC Only
NEW LOWER PRICE	APS Q 341[1]	326MB	$299.95	N/A
NEW LOWER PRICE	APS Q 514[1]	491MB	379.95	N/A
	APS T 504[1]	504MB	379.95	NEW FROM APS $479.95*
	APS T 800[1]	773MB	599.95	NEW FROM APS 699.95*

* AC/DC available for $50.00 extra
**SR 1000 AC only enclosure

APS DISK ARRAYS (Level 0-5)

Model	Capacity	RAID LEVEL	Price
ARRAID S2/5400[5]	2GB	0 (Striped)	$1299.95
ARRAID M1/7200[5]	1GB	1 (Mirrored)	1599.95
ARRAID S2/7200[5]	2GB	0 (Striped)	1599.95
ARRAID M2/7200[5]	2GB	1 (Mirrored)	2399.95
ARRAID S4/7200[5]	4GB	0 (Striped)	2399.95
ARRAID S8/7200[5]	8GB	0 (Striped)	3299.95
NEW FROM APS ARRAID S8/7200[5]	8GB	5 (Parity)	4999.95

DATerm™ patent pending
Copyright © 1995 APS Technologies
Internal drives for Quadra 800 and Centris 610 available
Listed capacities are formatted
Full Height cases include SCSI Sentry FREE!
1-5 Denotes length of manufacturer's warranty in years
** External case is special Full Height only*

ARRAID systems from APS are high performance, easy-to-use disk array storage solutions.

- ✔ Performance
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APS T 800 $599.95

NEW FROM APS *Internal configuration*

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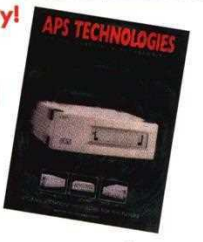

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External configuration

OPEN 24 HOURS A DAY SEVEN DAYS A WEEK! 24 x 7

PRICELESS SUPPORT!

APS HyperTape™

- ✓ 2GB capacity without compression
- ✓ Up to 4GB capacity with software compression
- ✓ Includes Retrospect v 2.1 FREE!
- ✓ 2-year warranty

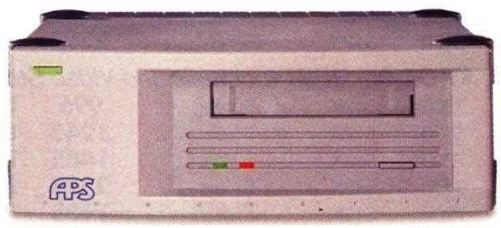
Retrospect included free with all DAT, DLT & HyperTape drives

APS 1.3GB MO

- ✓ 4MB cache helps speed data transfer rates to 1.46MB per second
- ✓ 2-year warranty

$1799.95

External configuration



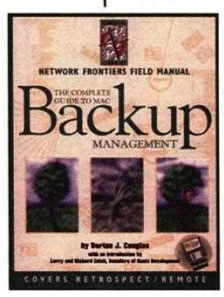
APS HyperDAT

- ✓ DDS-2 technology
- ✓ Capacity up to 8GB*
- ✓ Transfer rates up to 28MB per minute
- ✓ Includes Retrospect v 2.1 FREE!
- ✓ 2-year warranty

$999.95

External configuration with tape!

The Complete Guide to Mac Backup Management



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OR PURCHASE THE BOOK FOR ONLY $9.95 WHEN YOU BUY AN APS DAT[2]

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APS TAPE DRIVES

Model	Capacity*	Internal	External
APS HyperTape[2]	2GB+	—	$499.95
APS DAT[2][2]	4GB+	$749.95	799.95
APS HyperDAT[2]	8GB†	949.95	999.95
APS DLT40[2]	40GB†	—	5499.95

NOW WITH TWICE THE CAPACITY FOR THE SAME PRICE

*Actual data compression and tape capacity vary greatly depending on the type of data recorded, other system parameters and environment.
† 2:1 Hardware data compression.
+Native capacity without data compression.
All APS DAT, DLT & HyperTape drives include Retrospect by Dantz

Tape Media	1-4	5-19	BEST VALUE! 20+
3080XLF (HyperTape)	$34.95	$32.95	$31.95
60-Meter	7.95	6.95	5.95
90-Meter	9.95	8.95	7.95
120-Meter (DDS-2)	19.95	18.95	17.95
DLT20 Data cartridge	45.95	—	—
DLT40 Data cartridge	109.95	—	—
DLT20 3PK cartridges	119.95	—	—
DLT40 3PK cartridges	299.95	—	—

APS REMOVABLE DRIVES

Model	Capacity	SR2000
APS SQ 3270[2]	255MB	$479.95
APS SQ 5200[2]	194MB††	499.95

†† Does not format 44MB & 88MB cartridges
1-5 Denotes length of manufacturer's warranty in years
All SyQuest drives include 1 FREE cartridge

NEW LOWER PRICE

SyQuest Media	1-4	5-9	BEST VALUE! 10+
SQ-400 (44MB)	$44.95	$43.95	$41.95
SQ-800 (88MB)	54.95	53.95	51.95
SQ-2000 (200MB)	84.95	83.95	81.95
SQ-310 (105MB)	59.95	58.95	56.95
SQ-327 (270MB)	64.95	63.95	61.95

Prices listed are for unformatted media

APS CD-ROM DRIVES

Model	SR2000
APS T 3601[1] QUAD-SPEED	$349.95

APS MO DRIVES

Model	SR2000
APS 230MB MO[2] *New Lower Pricing!*	$599.95
APS 1.3GB MO[1] *New 4MB cache*	1799.95

1-5 Denotes length of manufacturer's warranty in years
All MO drives include 1 FREE cartridge

NEW FROM APS

MO Media	1-4	5-9	BEST VALUE! 10+
128MB cartridge	$27.95	$26.95	$22.95
230MB cartridge	39.95	38.95	34.95
1.3GB cartridge	89.95	88.95	84.95

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- Hard drives include brackets, cables, cords and LEDs required for operation with the specified Macintosh where applicable. All hard drives from APS Technologies come preformatted with Apple's System 7.0.1 software and APS Technologies' APS POWERTOOLS SCSI formatter/hard disk partitioner.
- All external drive products and cases come with a premium 25 x 50 SCSI cable.
- International customers must pay for all shipping charges.
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- Drive-for-Drive Repair or Replacement Warranty • The warranty length is denoted by the superscripted number next to each drive model. APS will, at its discretion, replace or repair products found to be defective according to the terms of the product's warranty.
- All prices and specifications are subject to change without notice.

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CD ROM Drives

Chinon CDA525 — 135/195
280ms access time, 300Kb/sec transfer rate,256K,1 Year Warranty

SONY CDU55 — 235/275
280ms access time, 300Kb/sec transfer rate

NEC 2VMac — 205/245
320ms access time, 300Kb/sec transfer rate, 1 Year Warranty

NEC 3Xp — na/398
240ms access time, 500Kb/sec transfer rate, 1 Year Warranty

Toshiba QuadSpeed — 340/380
120ms access time, 600Kb/sec transfer rate, 256K,1 Year Warranty

NEC 4Xe — 445/485
220ms access time, 600Kb/sec transfer rate,256K,1 Year Warranty

Plextor 4Plex — 385/425
235ms access time, 600Kb/sec transfer rate, 256K,1 Year Warranty

Plextor 6Plex — 555/615
235ms access time, 600Kb/sec transfer rate, 256K,1 Year Warranty

Kingston Technology Corporation

Removable Drive Carriers

- Provides ability to easily remove and transport data
- Ideal for disk array environments
- Compatible with single ended, narrow differential, or fast & wide SCSI disk drives
- SCSI ID select number is clearly displayed on front panel of the receiving frame
- Key locked to prevent unauthorized or untimley removal of the drive carrier
- 5 year warranty

"Kingston Data Silo's are ideal for enclosing 5.25" and 3.5" storage devices, including disks, tapes, DATs or optical drives for external SCSI expansion". Kingston Technology Corp.1994

Digital Linear Tape Drives

Quantum DLT

Model	Capacity	Trans.Rate	Media	Ext.
DLT2000	20 GB	2.5MB/sec.	DLT20	$3995
DLT4000	40 GB	3.0MB/sec.	DLT40	$Call!

1 free cartridge with each DLT purchase

These drives are ideal for AV and network backup due to their advanced linear recording technology and a highly accurate tape guide system . DLT allows you to backup 150 to 180 MB per minute. DLT is your high capacity high performance backup solution.

Optical Drives

	Capacity		Access	Warranty	Ext.
Hewlett Packard	1.3 GB	1716T	23.5ms	1 Year	2295
MaxOptics	1.3 GB	Tahitti III	18ms	1Year	2395
Fujitsu	230 MB	M2512	30ms	1Year	575

1 free cartridge with each drive purchase

Hard Drive Cabinets

Zero Footprint 10.75" x 9.75" x 2" $75
MicroCab 8.5" x 6.75" x 2" $85
Full Height 9.75" x 9.5" x 4.5" $135
Multi Bay Cabinets ..... $CALL
Two, four, six, and eight bay cabinets available. All cabinets come with a 25-50 pin Mac system cable and a power cable. 1 year warranty on all cabinets.

Scanners

Nikon	Scantouch	$1299
	Transparency Adapter	$599
	Coolscan	$1499
UMAX	UC630/1260	$675/1240
	Vista S6	$760
	Powerlook	$3250

All prices are subject to change without notice. Returned products are subject to a restocking fee. International customers pay all shipping charges. All shipping charges are non-refundable. To return merchandise call for an RMA number. All RMAs must be returned within 10 business days of issuance. Customers are responsible for all returned product shipping charges.

VISA MasterCard

Business Hours
8:00am-7:00pm (CST)

NEW Quantum Quantum Quantum

	Capacity	Seek	RPM	Cache	Warranty	Int.	Ext.
LPS Series	170 MB	14 ms	3600	128K	2 Year	135	195
Lightning	365 MB	11 ms	4500	128K	2 Year	155	215
Trailblazer	420 MB	14 ms	4500	128K	3 Year	185	245
DSP3053	535 MB	9 ms	5400	512K	2 Year	225	285
Maverick	540 MB	14 ms	3600	128K	2 Year	190	250
Fireball	540 MB	11 ms	5400	128K	3 Year	195	255
Lightning	730 MB	11 ms	5400	128K	2 Year	255	315
Trailblazer	850 MB	14 ms	4500	128K	3 Year	275	335
Fireball	1080 MB	11 ms	4500	128K	3 Year	395	455
Empire	2100 MB	9.5 ms	5400	512K	5 Year	890	950
Capella	2.0 GB	8.5ms	5400	1024K	5 Year	795	855
Atlas Series	2.0 GB	9ms	7200	1024K	5 Year	925	985
Grand Prix	4200 MB	8.6 ms	7200	512K	5 Year	1095	1155
Atlas Series	4.3 GB	9ms	7200	2048K	5 Year	1495	1555

	Capacity	Size	Seek	Cache	Warranty	Int.	Ext.
Daytona	256 MB	Powerbook 2..5"	17 ms	128K	1 Year	215	275
Daytona	341 MB	Powerbook 2..5"	17 ms	128K	1 Year	295	355
Daytona	514 MB	Powerbook 2..5"	17 ms	128K	1 Year	385	445

New Products MICROPOLIS MICROPOLIS New Pricing!!

	Capacity	Access	RPM	Cache	Warranty	Int.	Ext.
M4221	2.1 GB	8.5 ms	7200	512K	5 Year	895	955
M4221Wide	2.1 GB	8.5 ms	7200	512K	5 Year	1080	1140
M1936	3.6 GB	11 ms	5400	512K	5 Year	1195	1295
M3243	4.3 GB	8.5 ms	7200	512K	5 Year	1385	1445
M3243Wide	4.3 GB	8.5 ms	7200	512K	5 Year	1475	1535
M1991	9.0 GB	12 ms	5400	512K	5 Year	2195	2295
M1991Wide	9.0 GB	12 ms	5400	512K	5 Year	2295	2395

Direct to Disk Recording AV Drives- BEST for Music and Video Storage

M4221AV	2.1 GB	8.5 ms	7200	512K	5 Year	995	1055
M1936AV	3.6 GB	11 ms	5400	512K	5 Year	1245	1345
M3243AV	4.3 GB	8.5 ms	7200	512K	5 Year	1485	1545
M1991AV	9.0 GB	12 ms	5400	512K	5 Year	2325	2425
M4221WideAV	2.1 GB	8.5 ms	7200	512K	5 Year	1135	1195
M3243WideAV	4.3 GB	8.5 ms	7200	512K	5 Year	1595	1655
M1991WideAV	9.0 GB	12 ms	5400	512K	5 Year	2495	2595

NEW MICRODISK LT *3.5"Stackable Disk Subsystems, Super Capacity External Storage*

M2100	2.1 GB	8.9 ms	7200	512K	5 Year	Call for the most
M4200	4.3 GB	8.9 ms	7200	512K	5 Year	competitive pricing

SPRING SPECIALS

Quantum 170MB ..... Int. $135 Ext. $195
3600RPM, 14ms seek, 128K cache, 2 year warranty

Quantum 365MB ..... Int. $155 Ext. $215
4500RPM, 11ms seek, 128K cache, 2 year warranty

Quantum535MB ..... Int. $225 Ext. $285
DSP3053, 5400RPM, 9ms seek, 512K cache, 2 year warranty

Quantum Trailblazer 850MB ..... Int. $275 Ext. $335
QTB850, 4500RPM, 14ms seek, 128K cache, 3 year warranty

Quantum Fireball 1.0GB ..... Int. $395 Ext. $455
QFB1080, 4500RPM, 11ms seek, 2 year warranty

Micropolis 2.0GB ..... Int. $895 Ext. $955
M4221,7200RPM, 9ms seek, 5 year warranty

Seagate Barracuda 4.0GB ..... Int. $1495 Ext. $1555
ST15150N, 7200RPM, 8ms seek, 5 year warranty

Seagate Seagate Seagate Seagate

	Capacity	Seek	RPM	Cache	Warranty	Int.	Ext.
Hawk 2LP	1.2 GB ST31230N	9ms	5400	512K	5 Year	535	595
Hawk 4	4.2 GB ST15230N	9ms	5400	512K	5 Year	1185	1245
Barracuda 2LP	2.5 GB ST32550N	8ms	7200	1024K	5 Year	1050	1110
Barracuda 4	4.2 GB ST15150N	8ms	7200	1024K	5 Year	1495	1555
Barracuda 2Wide	2.5 GB ST32550Wide	8ms	7200	1024K	5 Year	1125	1195
Barracuda 4Wide	4.2 GB ST15150Wide	8ms	7200	1024K	5 Year	1590	1650
Elite 9	9.0 GB ST410800N	11ms	5400	512K	5 Year	2595	2695

FUJITSU FUJITSU FUJITSU FUJITSU FUJITSU FUJITSU

	Capacity	Seek	RPM	Cache	Warranty	Int.	Ext.
M2684	530 MB	9ms	4500	256K	5 Year	205	265
M1606SA	1.2 GB	9ms	4500	512K	5 Year	495	555

HEWLETT PACKARD HEWLETT PACKARD HEWLETT PACKARD HEWLETT PACKARD HEWLETT PACKARD

	Capacity	Access	RPM	Cache	Warranty	Int.	Ext.
C3724SE	1.2 GB	9.5 ms	5400	512K	5 Year	550	610
C2490SE	2.4 GB	8.5 ms	6300	512K	5 Year	1095	1155

All in Stock! SyQuest Technology

Capacity	Seek	RPM	Int.	Ext.
88 MB SQ5110C	20 ms	3200	285	345
200 MB SQ5200	18 ms	3200	405	465
270 MB SQ3270	13.5 ms	3200	405	465

2 Year Warranty on all SyQuest Drives.
SyQuest drives come complete with 1 cartridge(Formatted or Unformatted) and the latest SCSI 4.3 compatible software

SyQuest Technology Media

Capacity	Model	Warranty	Price
44 MB	SQ400	5 year	$41
88 MB	SQ800	5 year	46
105 MB	SQ310	5 year	50
200 MB	SQ2000	5 year	74
270 MB	SQ327	5 year	61

SCSI-2 Accelerators

Atto

Silicon Express Fast SCSI-2 — 525
SCSI 1 & 2 support,transfer rates up to 10.0 MB/sec,supports multiple block sizes,takes advantage of parallel processing capability by transferring data directly between the Mac RAM and the SCSI bus! Ideal for graphic design,multimedia applications,software design, and more!

Silicon Express 4 Card — 895
Fast/Wide (16Bit) SCSI-2 accelerator card for Apple's Nubus based computers. Supports Fast/Wide SCSI 2 (16 Bit) transfer rates up to 20MB/sec., and fast SCSI-2 (8 Bit) transfer rates up to 10MB/sec. Full 16 Bit WIDE support for the latest drives and disk arrays . Fully compatible with all existing SCSI-1 drives . Formatting software is included. 5 Year Warranty.

Remus RAID Software — Call

Tape Backup Drives

HEWLETT PACKARD

Capacity	Model	Media	Int.	Ext.
2-0 GB	35470	4mm	$935	$985
3-5 GB	35480	4mm	1105	1150
4-10 GB	1533A	4mm	1235	1295
20-50 GB	1553A Auto Tape Loader		3495	3595

Exabyte

Capacity	Model	Media	Int.	Ext.
2-5 GB	8205XL	8mm	$1395	$1485
7-14 GB	8505XL	8mm	2130	2190

Dat drives include 1 piece of media and Retrospect Software

DeskTape™ Allows you to mount your DAT on the desktop. Backing up your data is as easy as drag and drop!

ProDirect always suggests that our customers backup their hard drives. In the event of hard drive failure, be assured and back up your data with quality tape backup drives from Hewlett Packard and Exabyte.

Memory Products

Memory	Centris,LCIII,Quadra
2x8x80	4MB 60/70ns
4x8x80 60/70ns	8MB 60/70ns
4x8x80 FX	16MB 70ns
16x8x80 Low Profile	32MB 60ns
16x8x80 FX	VRAM 256K/512K

Powerbook Memory
520,520C,540,540C
4MB,8MB,16MB,32MB
140,170,160,165C,180,180C,Duos
4MB,6MB,8MB,10MB, 12MB,14MB,20MB

Lifetime Warranty on all Memory Products!!

Always call for the most competitive pricing on memory.

DIRECTTech

MICROPOLIS

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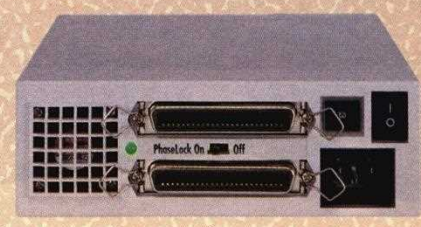
Phaser Enclosures can also be set on end.



PhaseLock Termination™

All Phaser-I Enclosures feature PhaseLock Termination, the latest in active termination technology, exclusively from DirectTech. Put an end to your SCSI headaches. PhaseLock monitors and regulates your SCSI chain and eliminates any termination problems.

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No charge for Visa or Mastercard.

Government, Corporate, and University P.O.s welcome!

- 30-day money-back guarantee on all drives.
- Refused orders subject to restocking fee.
- RMA No. required for all returns.

Prices, terms, and availability are subject to change without notice.

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THE ALL NEW (STACKABLE) PHASER LINE OF ENCLOSURES

A DIRECTTECH EXCLUSIVE...AVAILABLE FOR ALL 3.5" EXTERNAL DRIVES

NOW WITH ACTIVE TERMINATION
Kiss Your SCSI Troubles Goodbye

HARD DRIVES

ALL DRIVES ARE PREFORMATTED, TESTED AND PACKAGED WITH SCSI MANAGER 4.3 COMPATIBLE DRIVERS. EXTERNAL DRIVES INCLUDE CHOICE OF 25-50 OR 50-50 PIN CABLE.

Capacity	Model No.	Mechanism	Size	Seek	RPM	Warranty	Internal	PHASER-I
365 MB	DT-365LT	Quantum	3.5"	11 ms	4500	2 yrs	$139	$215
540 MB	DT-540LT	Quantum	3.5"	11ms	4500	2 yrs	$195	$270
730 MB	DT-730LT	Quantum	3.5"	11 ms	4500	2 yrs	$229	$305
1.0 GB	DT-1080FB	Quantum	3.5"	9.5 ms	7200	5 yrs	$449	$525
1.05 GB	DT-31230	Seagate	3.5"	9.0 ms	5400	5 yrs	$515	$595
2.0 GB	DT-4221	Micropolis	3.5"	8.5 ms	7200	5 yrs	$895	$970
2.0 GB	DT-32150	Quantum	3.5"	8.0 ms	7200	5 yrs	$999	$1,075
2.0 GB	DT-2490	HP	3.5"	9.0 ms	6400	5 yrs	$1,099	$1,175
2.1 GB	DT-32550	Seagate Barracuda	3.5"	8.0 ms	7200	5 yrs	$989	$1,065
2.1 GB	DT-32550W	Seagate Barracuda Wide	3.5"	8.0 ms	7200	5 yrs	$1,075	$1,190
4.3 GB	DT-3243	Micropolis	3.5"	8.5 ms	7200	5 yrs	$1,395	$1,470
4.3 GB	DT-15150	Seagate Barracuda	3.5"	8.0 ms	7200	5 yrs	$1,465	$1,540
4.3 GB	DT-15150W	Seagate Barracuda Wide	3.5"	8.0 ms	7200	5 yrs	$1,550	$1,699
4.3 GB	DT-4280	Quantum GP	3.5"	8.0 ms	7200	5 yrs	$1,159	$1,235
9.0 GB	DT-1991	Micropolis	5.25"	12 ms	5400	5 yrs	$2,195	$2,295
9.0 GB	DT-410800	Seagate Elite 9	5.25"	11 ms	5400	5 yrs	$2,215	$2,315

AUDIO/VIDEO TUNED HARD DRIVES

Capacity	Model No.	Mechanism	Size	Seek	RPM	Warranty	Internal	PHASER-I
1.05 GB	DT-31230AV	Seagate	3.5"	9 ms	5400	5 yrs	$515	$595
2.0 GB	DT-4221AV	Micropolis	3.5"	8.5 ms	7200	5 yrs	$945	$1,020
2.1 GB	DT-32550AV	Seagate Barracuda	3.5"	8.0 ms	7200	5 yrs	$989	$1,065
4.3 GB	DT-3243AV	Micropolis	3.5"	8.5 ms	7200	5 yrs	$1,445	$1,520
4.3 GB	DT-15150AV	Seagate Barracuda	3.5"	8.0 ms	7200	5 yrs	$1,465	$1,540
9.0 GB	DT-1991AV	Micropolis	5.25"	12 ms	5400	5 yrs	$2,245	$2,345
9.0 GB	DT-410800AV	Seagate Elite 9	5.25"	11 ms	5400	5 yrs	$2,215	$2,315

SYQUEST

INCLUDES ANUBIS FORMATTING SOFTWARE AND ONE CARTRIDGE

Capacity	Model No.	Internal	PHASER-I
88 MB	SQ5110C	$305	$365
200 MB	SQ5200	$420	$480
270 MB	SQ3270	$420	$470

TAPE

INCLUDES A FREE COPY OF RETROSPECT AND ONE TAPE

Capacity	Model No.	Format	PHASER-I
~2 GB	HP-35470	4mm	$995
4-8 GB	Sony-5000	DDS-2	$1,165
4-8 GB	HP-1533A	DDS-2	$1,360
5-10 GB	Exabyte-8505	8mm	$2,275
10-20 GB	DLT-2000	DLT	$3,599

OPTICAL

INCLUDES ANUBIS FORMATTING SOFTWARE AND ONE CARTRIDGE

Capacity	Model No.	Seek	PHASER-I
230 mb	Fujitsu	30 ms	$675
1.3 GB	HP-C1716	23 ms	$2,099
1.3 GB	Maxoptix T-III	18 ms	$2,199

CD ROM

INCLUDES SOFTWARE

JVC Personal Archiver (2X)	$1,699
Call about 4X drives.	
Make Your Own CDs! Includes Software and Cabling	

SPECIAL!!!

HERE'S YOUR BEST BUY.

The Micropolis 2.0 GB with a8.5 ms seek time. and a five year warranty. You can't beat this drive.

$899.00

ORDER TODAY!
(Internal Configuration)

DISK ARRAYS

Capacity	Model No.	Raid Level	External
2.0 GB	DT-31200-2AR	0, 1	$ Call
4.0 GB	DT-32550-2AR	0, 1	$ Call
8.0 GB	DT-15150-2AR	0, 1	$ Call

These drives are perfect for Videovision.

MEDIA

Type	Price	Type	Price
Syquest 44	$42	Optical 128 MB	$26
Syquest 88	$48	Optical 230 MB	$30
Syquest 105	$54	Optical 1.0 GB	$100
Syquest 200	$76	Optical 1.3 GB	$95
Syquest 270	$60		

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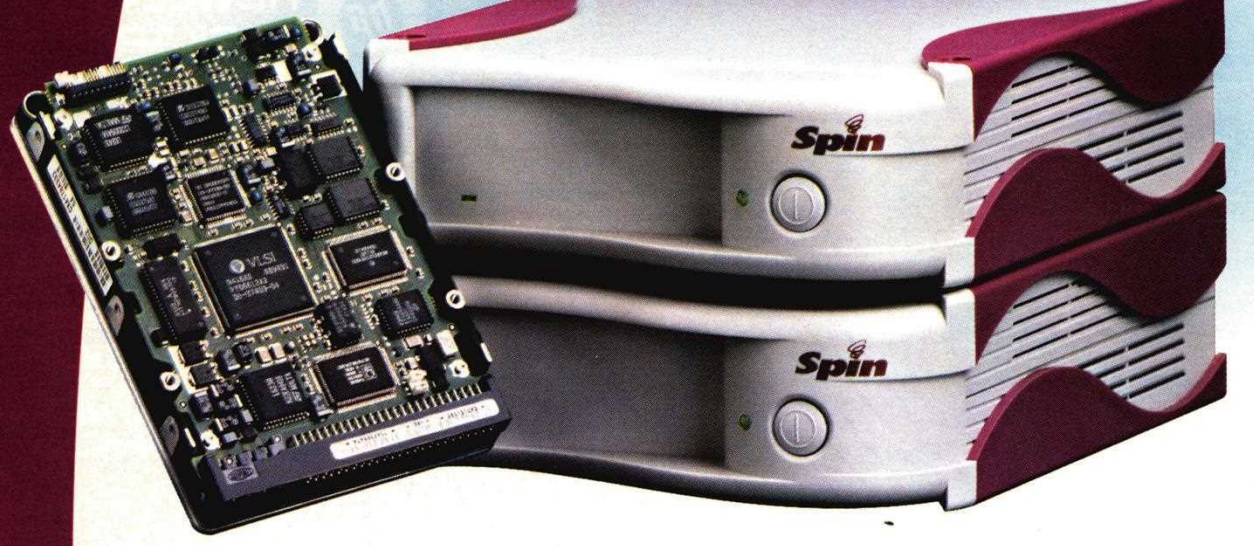

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2 Gigabytes for just $849!

Large Capacity Hard Drives

Introducing the latest technology in large capacity solutions for your expanding storage needs.

CAPACITY	INTERNAL	TORNADO
S Hawk LP 2GB	$849	$949
Q Capella 2GB	$849	$949
Q Grand Prix 2GB	$899	$999
Q Atlas 2GB	$999	$1099
Q Atlas 4GB	$1499	$1599

$379!
Including Cartridge!

Bernoulli Drives

Spin's 230MB removable cartridge drive is a premium storage solution for DTP and graphics users. Five year warranty and one cartridge included.

Bernoulli 230MB	$379
Single Cartridge	$89
3-Pack	$199

Retrospect backup software included.

DAT Drives

Spin DAT drives are the flexible backup solution for all types of users. Store up to 8GB of data on one inexpensive tape. One cartridge included.

Spin 3100 (DDS)	$799
Spin 3200 (DDS-DC)	$899
Spin 3400 (DDS-2)	$999

QuickTape

Back up your small business and home systems in minutes with QuickTape. Includes a 1GB QIC-WIDE cartridge and backup software.

QuickTape	$499
Cartridge	$19

230MB
Only $599
Two Cartridges Included!

Magneto-Optical

Backup or archive your valuable Photoshop™, QuarkXPress™, Excel™, Word™, and database files for years with Spin Magneto-Optical drives. Maxoptics 1.3GB includes one cartridge.

Olympus 230MB	$599
Cartridge	$39
Maxoptix T4 1.3GB	$1999
Cartridge	$85

SyQuest Drives

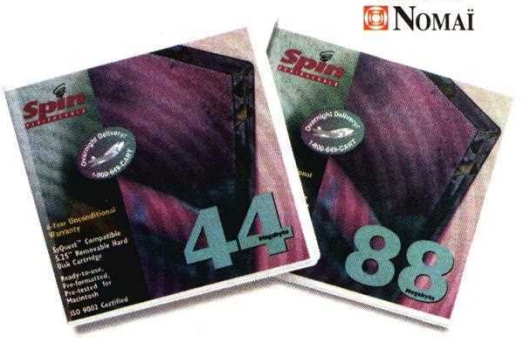
Transport and save your DTP, graphics, digital photography, and prepress files with SyQuest drives. All drives delivered with one cartridge.

CAPACITY	DRIVE	CARTRIDGE
44MB		$43
44/88MB	$339	$48
200MB	$479	$75
105MB	$249	$56
270MB	$479	$65

MacUser RATED 4½ FEBRUARY 1995

4½ mice rating for our SyQuest 200 and 270!

Manufactured by NOMAÏ



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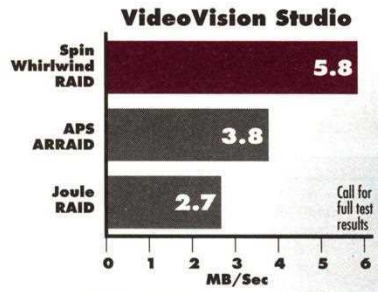

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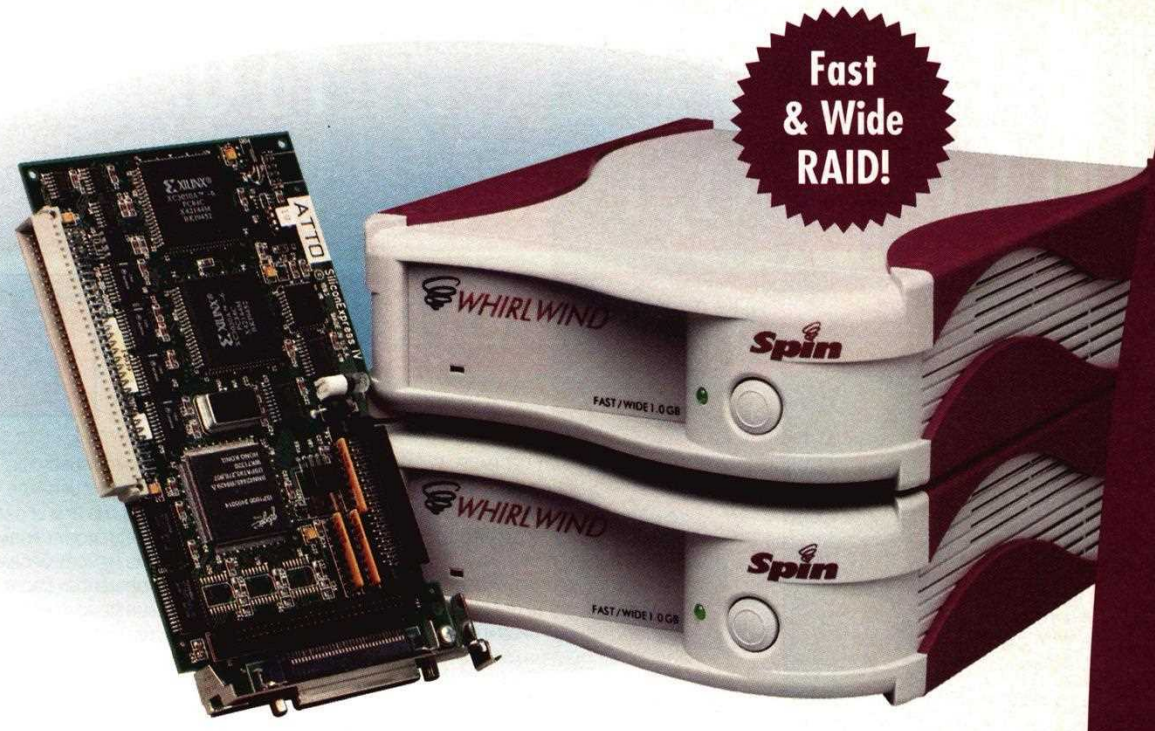

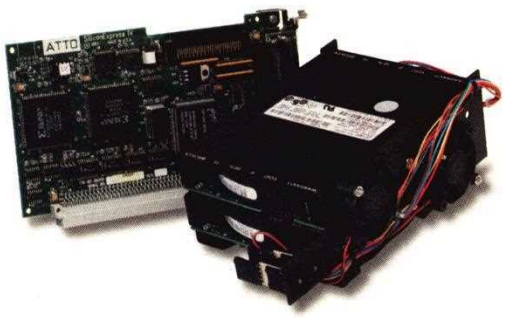

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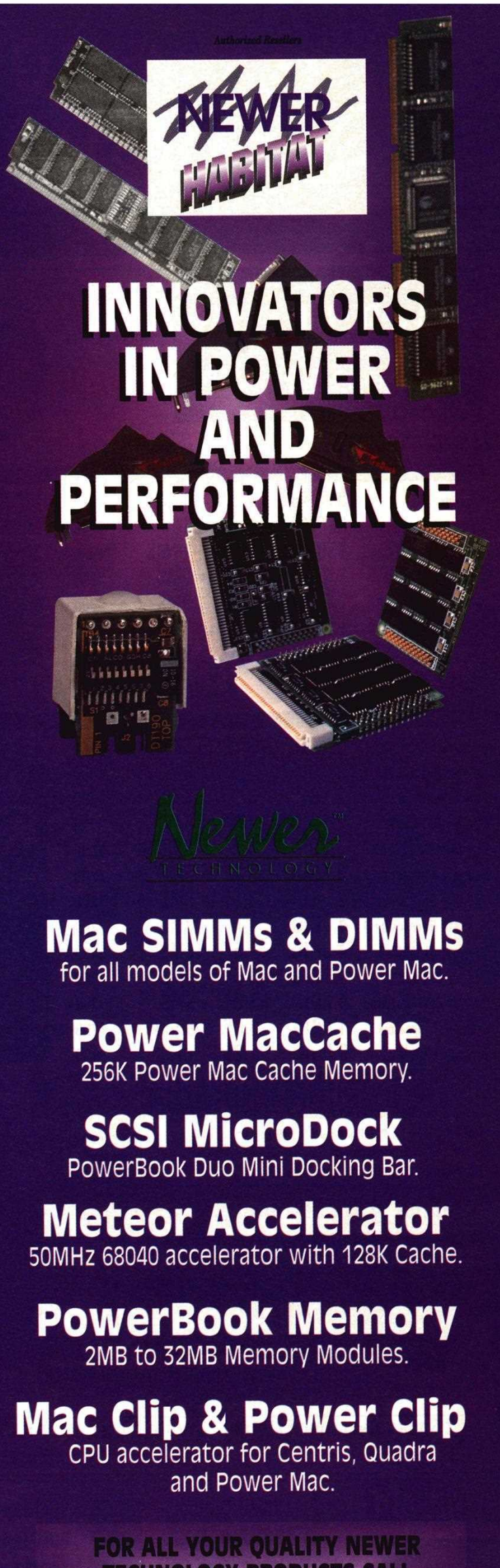

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FUJITSU M1606S	1.2GIG	3.5" LP	10MS	5400	$ 415	$ 475
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Fujitsu M2915S	2.1GIG	3.5"	8.9S	7200	$ 939	$ 999
Conner CFP2107S	2.1GIG	3.5" LP	8MS	7200	$ 955	$ 1015
Quantum XP32150S	2.2GIG	3.5" LP	8.6MS	7200	$ 935	$ 995
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Seagate Barracuda 2W	2.5GIG	3.5" LP	8MS	7200	$ 1139	$ 1199
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Seagate ST15230N	4.3GIG	3.5"	9MS	5400	$ 1155	$ 1215
Conner CFP4207S	4.2GIG	3.5"	9MS	7200	$ 1295	$ 1355
Conner CFP4207wide	4.2GIG	3.5"	9MS	7200	$ 1395	$ 1455
Grand Prix XP34301S	4.3GIG	3.5"	8.6MS	7200	$ 1089	$ 1149
Seagate Elite 9	9.0GIG	5.25"	11MS	5400	$ 2495	$ 2595

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- MacWorld Mar. '95

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MEDIA

128MB Optical	$ 25	60M Tape	$ 10
230MB Optical	$ 29	90M Tape	$ 12
1.3GIG Optical	$ 85	112M Tape	$ 15
10 Blank CD's	$ 99	120M Tape	$ 20
88MB Squest	$ 48	200MB Syquest	$ 76
105MB Syquest	$ 54	270MB Syquest	$ 61

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FROM 1 TO 84 GIG

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- **This Array is the one to beat!! 4.0 GIG Wide Raid** $ 3399
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Atto Silicon Express IV $835
accelerator card

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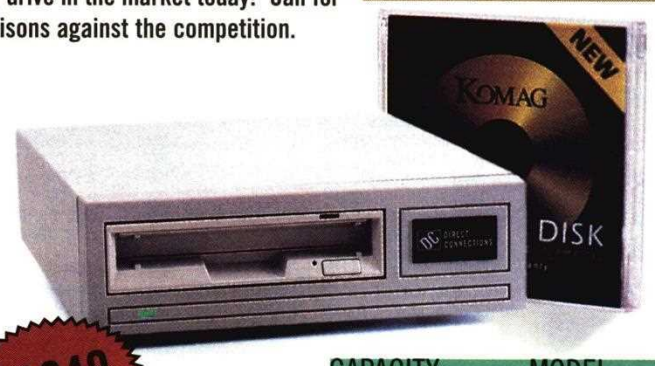

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1.3GB	NEC	$ 1599
1.3GB	Sony 4MB cache	$ 1949
1.3GB	Ricoh Turbo	$ 2175
Sony's latest technology → 26GB	Sony Jukebox	$ 6395

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1.3-4GIG	DC DOUBLE DAT	4MM	$ 839	$ 899
4.0-8GIG	Sony 5000 DDS-2	4MM	$ 939	$ 999
7.0-14GIG	Exabyte 8505XL	8MM	$ 2135	$ 2195
-32GIG	Conner Autoloader	4MM		$ 2475
-40GIG	DLT4000	1/2"		$ 4999
-50GIG	Exabyte-10i	8MM		$ 2895
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MAC XTRA DISCOUNTS

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44MB FMTD SYQUEST CARTRDGE 42
44MB SYQUEST CARTRDGE 40
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88MB SYQUEST CARTRDGE 45
105MB SYQUEST CARTRDGE 53
200MB SYQUEST CARTRDGE 74
270MB SYQUEST CARTRDGE 57

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150MB BERNOULLI CARTRIDGE 95
44MB BERNOULLI CARTRIDGES 93
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VERBATIM DATA 4MM DC 295 FT 9
VERBATIM DATA 8MM DC 367 FT 7
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VERBATIM MINI/QIC 120MB/307FT 15
VERBATIM MINI/QIC 40MB/205FT 12
VERBATIM EP-S HIGH YIELD TONER 59
VERBATIM EP-N TONER CART 85
VERBATIM EP-L TONER CART 75
VERBATIM ANTI-GLARE FILTER 14/15" 33

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3.5" 128MB OPTICAL 19
3.5" 230MB OPTICAL 22
5.25" 1.0GB OPTICAL 53
5.25" 600/650MB OPTICAL 46

TDK AUDIO PRODUCTS

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90 MINUTE HIGH BIAS $2.49
90 MINUTE NORMAL BIAS .....$.99
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120 MIN. EXTRA HIGH $3.25
120 MIN. HI-FI GRADE $3.50
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120 MIN. 8 MM EXTRA HIGH $4.75
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SONY BATTERIES

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C2 PACK $2.99
AA 2 PACK $2.49
9 VOLT 1 PACK $2.99
AAA 2 PACK $2.99

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120 MINUTE / 4 PACK .....$4.99/$16.99
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120 MIN HI-8 METAL EVAP/4 PACK .....$14 / $48
120 MIN HI--8 METAL PART/4 PK. .....$8.99/$33.99

VHS TAPES

120 MINUTE / 4 PACK .....$3.00 / $11
160 MINUTE $3.50
120 / 160 MINUTE SUPER .....$8.50 / $10
•WORKS WITH SUPER VHS PLAYER

BETA TAPES (LIMITED AVAILABILITY!)

500 / 750 METER LGTH .....$3.00 / $3.50
750 METER LGTH HIGH GRADE $4.00
500 METER LGTH METAL $15.99

CABLES

MAC HAYES HANDSHAKING CABLE 9
MODEM CABLE 6'PLUS/SE/II 5
SCSI CABLE M50-50 6' CABLE 14
SCSI M50-M50 18 CABLE 8
SCSI TERMINATOR 14

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1 X 8 X 70NS MEMORY UPGRADE 35
1 X 8 X 80NS FX MEMORY UPGRADE 34
1 X 8 X 80NS MEMORY UPGRADE 34
1 X 9 X 70NS MEMORY UPGRADE 42
2 X 8 X 70NS MEM0RY UPGRADE 74
2 X 8 X 80NS MEMORY UPGRADE 75
4 X 8 X 100NS II/IIX UPGRADE 146
4 X 8 X 70NS FX MEMORY UPGRADE 132
4 X 8 X 70NS II/IIX UPGRADE 135
4 X 8 X 70NS MEMORY UPGRADE 128
4 X 8 X 80NS FX MEMORY UPGRADE 149
4 X 8 X 80NS II/IIX UPGRADE 130
4 X 8 X 80NS MEMORY UPGRADE 125
4 X 9 X 70NS MEMORY UPGRADE 156
8 X 8 X 80NS FX MEMORY UPGRADE 314
8 X 8 X 80NS UPGRADE 265
16 X 8 X 70NS LOW PROFILE 575
16 X 8 X 80NS FX MEMORY UPGRADE 560

72 PIN

1X32 4MB 60NS 72PIN UPGRADE 148
1x32-4MB MEMORY UPGRADE 72PIN 142
2 X 36/8MB MEMORY UPGRADE 325
2x32-8MB MEMORY UPGRADE 72 PIN 272
4x32 SIMMS 16MB 70NS 538
4x32-16MB NON COMP POWER MAC 516
8 X 36 X 60NS 1288
8MB 60NS SIMM QUADRA 800 72PIN 293
8X32 32MB 60NS UPGRADE 1177

VRAM

256K 80NS VIDEO RAM 17
512K VIDEO RAM 30

FPU, MATH CO-PROCESSORS

CENTRIS FPU 25MHZ 275
CLASSIC MATH COPROCESSOR 16MHZ 46
CLRCLSC POWERCACHE ADAPTER 100
FPU 33MHZ DUO/P600 51
FPU COLOR CLASSIC 16MHZ 41
LC MATH COPROCESSOR 16MHZ 43
LC575 33MHZ MATH COPROCESSOR 336
LCIII 25MHZ MATH COPROCESSOR 47

POWERBOOK MEMORY

PB100-4MB MEMORY UPGRADE $124
PB100-6MB MEMORY UPGRADE 163
PB140/145B/170-4MB RAM UPGRADE 92
PB140/170-6MB MEMORY UPGRADE 132
PB160/180-4MB MEMORY UPGRADE 101
PB160/180-6MB MEMORY UPGRADE 146
PB160/180-8MB MEMORY UPGRADE 210
PB160/180-10MB MEMORY UPGRADE 287

PB150 SERIES

PB 150 4MB 171
PB 150 8MB 328
PB 150 14MB 572
PB 150 RAM ADAPTOR 13
PB 165C/180C 4MB RAM 99
PB 165C/180C 6MB RAM 146
PB 165C/180C 8MB RAM 210
PB 165C/180C-10MB 393

PB500 SERIES

PB 500 SERIES 4 MB RAM 163
PB 500 SERIES 8 MB RAM 313
PB 500 SERIES 16MB RAM 533
PB 500 SERIES 32MB RAM 1104

PBDUO 210/280 SERIES

PB DUO-4MB MEMORY UPGRA 161
PB DUO-6MB MEMORY UPGRA 317
PB DUO-8MB MEMORY UPGRA 316
PB DUO-12MB MEMORY UPGR 465
PB DUO-14MB MEMORY UPGR 538
PB DUO-20MB MEMORY UPGR 771
PB DUO-28MB MEMORY UPGR 1143

BATTERIES

REPLACEMENT BATTERY 140-180C 57
SLIMPK EXT BATT PB100-180C 138
AUTOMOBILE PB ADAPTER 59
BATTERY PB140-180 59
MINI A/C ADAPTER FOR DUO 48
MINI A/C ADAPTER FOR POWERBOOK 48
PB 100 EXTERNAL BATTERY CHARGE 110
PB BATTERY CHARGER/CONDITIONER 51
PB100 BATTERY 43

MONITORS

SUPERMATCH 17XL 819
SUPERMATCH 17T 869
SUPERMATCH 20 PLUS 1865
RADIUS PRECISION VIEW 17" 945
PRECISION COLOR PIVOT 999
PRECISIONCOLOR 17 RADIUS 1258
INTELLICOLOR 20E 2475
NEC MULTISYNC XV14/15/17 .....340/465/815
NEC MULTISYNC XE15/17/21 .....589/1079/1919
NEC MULTISYNC XP15/17/21 .....630/1115/2320

VIDEO

PRECISIONCOLOR PRO 24X NUBUS 1135
PRECISIONCOLOR PRO 24XK NUBUS 795
THUNDER IV GX-1360 RADIUS 2420
THUNDER IV GX-1152 RADIUS 2019
THUNDER IV GX-1600 RADIUS 2995
RADIUS THUNDER 24 GT 1415
SPIGOT PRO AV 1290

MODEMS

HAYES

HAYES ACCURA 14.4 FAX/MODEM $119
HAYES OPTIMA 14.4 FAX/MODEM 410
HAYES OPTIMA 28.8 FAX EXT V.34 459

PROMETHEUS

PROMETHEUS HOME OFFICE W/V EXT 215
PROMETHEUS PB INT 14.4 F/MODEM 179

ZOOM

ZOOM 2400 BPS MODEM 65
ZOOM V.FAST 28.8 V.34 FAX MODEM 182
ZOOM VFX 14.4 V.32BIS S/R FAX 125
ZOOM VFXV 14.4 V.32BIS W/VOICE 147

$98 SUPRA EXPRESS 14.4 PLUS

SUPRA 14.4 S/R FAX 179
SUPRA 2400 BAUD MODEM 58
SUPRA 28.8 PB FAX/MODEM 303
SUPRA 28.8 V.34 S/R Fax Modem 218
SUPRA V.32BIS PB FAX 161
SUPRAEXPRESS 144 PLUS 98

DRIVES

OPTICAL DRIVES

RUMI 128MB OPTI DRV W/ 5 CART 775
RUMI 128MB OPTICAL DRIVE 659
RUMI 230MB MO DRIVE R/W 128MB 689
RUMI 230MB MO DRIVE W/ 5 CART 839

DAT DRIVES

RUMI DAT 2.0GB W/RETROSPECT 779
RUMI DDS/2 DAT 8.0GB W/RETRO 1115

CD-ROM DRIVES

RUMI CD-ROM DRIVE - MS 169
RUMI CD4X DRIVE W/FWB,CLARIS WORKS, GROLIER '95 305

ZIP DRIVES

ZIP DRIVE 199

$509 RUMI 270MB SYQUEST DRIVE

RUMI 88MB SYQUEST W/CART 369
RUMI 105MB SYQUEST W/CART 359
RUMI 200MB SYQUEST W/ CART 515
RUMI 270MB SYQUEST W/CART 509

HARD DRIVES

RUMI 1.2GB INTERNAL $1049
RUMI 1.4GB V EXTERNAL 999
RUMI 1080 EXTERNAL 709
RUMI EMPIRE 1080 INTERNAL 149
RUMI 160MB EXT/INT 245/184
RUMI 170MB EXT/INT 259/190
RUMI 270MB EXT/INT 260/205
RUMI 2.1GB EXT/INT 1115/1059
RUMI 340MB EXT/INT 259/186
RUMI 540MB EXT/INT 245/319
RUMI 365MB EXT/INT 269/205
RUMI 730MB EXT/INT 369/305
RUMI 340MB INTERNAL PB 349
RUMI 510MB INTERNAL PB 459

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$182 FARALLON ETHERWAVE NUBUS OR LC

ETHERWAVE NUBUS OR LC 182
ETHERWAVE AUI TRANSCEIVER 102
ETHERWAVE AAUI TRANSCEIVER 102
ETHERWAVE PRINTER ADAPTER 269

DAYNA

DAYNAPORT CS-T (10BASE-T) $79
DAYNAPORT CS-T 5 PAK (10BASE-T) 353
DAYNAPORT CS (BNC) 86
DAYNAPORT CS 5 PAK (BNC) 383
DAYNASTAR MINI HUB 5 (5 10BASE-T) 146
DAYNASTAR MINIHUB 8 (8 10BASE-T) 171
DAYNAPORT E/II (BNC,AUI) 114

ASANTE

MACCON + 610E ENET THICK/10BASE-T 169
MACCON+ 610 THICK/THIN/10BASE-T 197
MC+ 30IET64 THICK 155
MACS W/BUILT -IN ETHERNET - THIN/10BASE-T 84
MACS W/BUILT-IN ETHERNET - THIN 44
MACS W/BUILT-IN ETHERNET - THICK 69

$774 DAYSTAR TURBO 040 40MHZ

ACCELERATORS

POWERPRO 601 80MHZ W/RAM CACHE $1795
POWERPRO 601 100MHZ W/CACHE 1701
TURBO 040 40MHZ W/CACHE 774
TURBO 040I 33MHZ W/CACHE NO FPU 595
TURBO 601 66MHZ FOR IICI 925
TURBO 601 66MHZ IISI W/ADPT 975
TURBO 601 66MHZ IIVX, IIVI, P600 975
TURBO 601 100MHZ FOR IICI 1701
TURBO 601 100MHZ IISI W/ADPT 1701
TURBO 601 100MHZ IIVX, IIVI, P600 1701
POWERCARD 601 629

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25MHZ W/16K & FPU LC 92
33MHZ W/16K & FPU LCII/400 130
33MHZ W/PMMU II 174
40MHZ W/FPU C610 369
40MHZ C610 230
50MHZ W/FPU Q610 552
50MHZ W/FPU Q9/7, C/Q660 552
50MHZ W/FPU C650 552
32K CACHE IICI 47
25MHZ FPU Q/C610/650 185
33MHZ FPU LC575/P575 278
33MHZ/128K IICI/SI/X/CX 479
40MHZ/128K IICI/SI/X/CX 645

$365 DIIMO 040 50MHZ 64K LCIII/450

50MHZ 64K LCIII/450 365
50MHZ 64K LCII/P4 365
50MHZ 64K W/FPU 470
50MHZ 64K IICI/SI 365
128K CACHE IICI 110
128K CACHE IISI W/ADPTR 152
128K CACHE IISI/FPU/ADPTR 202
128K CACHE Q700/900 110
256K CACHE 149
256K CACHE & 80MHZ UPGR 235
512K CACHE 243
512K CACHE & 80MHZ UPGR 235
80/84 MHZ CLK UPGR 6/7100 110
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Title | Business Telephone

Company Name

Division | Mail Stop Delivery

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City | State | Zip

Business Fax Number

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☐ A. Home ☐ B. Alternate Company Address

Post Office Box or Street Address

City | State | Zip

• **Please start/continue my FREE subscription to MacWEEK.**
☐ 01. Yes ☐ 02. No

1 What is your organization's primary business activity at this *entire* location?
(Select one only) Write Answer Here ➡

Non-Computer Related
01. Graphic Arts
02. Publishing
03. Advertising, Public Relations, Promotion
04. Digital Media Development
05. Entertainment/Broadcast
06. Commerical Printer
07. Service Bureau/ Pre-Press
08. Aerospace
09. Architecture, Engineering
10. Telecommunications
11. Government
12. Manufacturing
13. Education: College/ University/Trade
14. Education: High School/Elementary
15. Finance: Banking, Accounting, Insurance, Real Estate, Legal
16. Health, Medical
17. Non-Computer Retailer, Wholesaler, Distributor
18. Research and Development
19. Agriculture, Mining, Construction, Oil
20. Transportation, Utilities

Computer Related
22. Manufacturer (Computers, Software, Peripherals)
23. VAR, VAD, Systems/ Network Integrator
24. Retailer/Distributor
25. Systems House/Data Processing Service
26. Computer Consultant
27. Other Businesses and Services
99. Other_____ (please specify)

2 What is your job function?
(Select one only) Write Answer Here ➡

A. Networking/Data Communications
B. MIS/DP/Information Systems
C. Systems Engineering
D. Telecommunications
E. Graphic Arts/Design
F. Production/Pre-Press
G. Video Production
H. Audio Production
I. Communications/ Publishing/Public Relations/Advertising
J. Engineering/Architecture
K. Science/Research & Development
L. Education/Training/ Development
M. Manufacturing/ Operations/Production/ Quality Control
N. Administration/ Management/Personnel
O. Accounting/Finance/ Legal
P. Sales/Marketing
Q. Purchasing
R. Consulting
Z. Other_____ (please specify)

3 Which of the following brands of systems and/or applications software do you have installed at this *entire* location? (Check all that apply)

Operating Systems
☐ 01. System 7
☐ 02. System 6, 5 or earlier
☐ 03. Unix/Xenix/AUX/AIX
☐ 04. PowerOpen
☐ 05. Windows
☐ 06. NeXTStep
☐ 07. Solaris
☐ 08. OSF/Motif
☐ 09. Other_____ (please specify)

Network Operating Systems
☐ 11. Novell NetWare
☐ 12. Unix/NFS
☐ 13. LAN Manager
☐ 14. Banyan VINES
☐ 15. AppleShare
☐ 16. DEC PathWorks
☐ 17. Other_____ (please specify)

Groupware
☐ 19. Lotus Notes
☐ 20. Windows for Workgroups
☐ 21. FirstClass
☐ 22. Novell GroupWise
☐ 23. Apple Open Collaboration Environment (AOCE)
☐ 24. Other_____ (please specify)

Database Engines
☐ 26. Oracle
☐ 27. Sybase SQL Server
☐ 28. Ingres
☐ 29. Informix
☐ 30. 4D Server
☐ 31. DB2
☐ 32. Other_____ (please specify)

On-Line Services
☐ 34. America Online
☐ 35. Compuserve
☐ 36. e-World
☐ 37. Prodigy
☐ 38. Internet
☐ 39. Delphi
☐ 40. Genie

4 Please indicate the quantities of the computers currently installed and indicate the computers planned for purchase in one year at this *entire* location.

(Write in accurate quantities for all that apply)	Currently Installed (Quantity)	PLAN TO PURCHASE
Macintosh/Compatible		
Apple Power Mac 8100	1.	1. ☐
Apple Power Mac 7100	2.	2. ☐
Apple Power Mac 6100	3.	3. ☐
Radius Power Mac Compatible	4.	4. ☐
Power Computing Power Mac Compatible	5.	5. ☐
Daystar Power Mac Compatible	6.	6. ☐
Other Power Mac Compatible	7.	7. ☐
Macintosh Quadra	8.	8. ☐
Macintosh Centris	9.	9. ☐
Macintosh Performa	10.	10. ☐
Macintosh PowerBook	11.	11. ☐
Macintosh Duo	12.	12. ☐
Macintosh Other (II, LC, SE, etc...)	13.	13. ☐
Other Mac Compatible	14.	14. ☐
Other Desktops		
IBM/Compatible Desktop/Laptop/Notebook	15.	15. ☐
PowerPC (Non-Mac Compatible)	16.	16. ☐
Workstation (SPARC, MIPS, HP/Apollo, etc)	17.	17. ☐
Other Microcomputers	18.	18. ☐

USE NUMBERS ONLY

5A How many servers are installed at this *entire* location? (Use numbers only)

5B How many LANs are installed at this *entire* location? (Use numbers only)

5C How many Macintoshes are connected to the LANs indicated in Question 5B above? (Use numbers only)

6 If applicable: how many Macintoshes are sold, resold, or recommended in one year at this *entire* location?

A. Retailer: Number sold per year_____
B. Reseller: Number resold per year_____
C. Consultant: Number purchased by your clients through your firm's recommendation per year_____
D. Other: Number sold/resold/recommended per year_____
☐ E. Not Applicable

7A Which of the following Macintosh-related products do you specify, recommend, buy or approve the purchase of? (Check all that apply)

Systems
☐ 01. Apple Macintoshes
☐ 02. Mac Compatibles
☐ 03. IBM Compatible Micros
☐ 04. Servers
☐ 05. Workstations
☐ 06. Minis/Mainframes
☐ 07. Newton PDA
☐ 08. Pen-Based Computers

Networking
☐ 10. LANs
☐ 11. WANs
☐ 12. Mac to PC Links
☐ 13. Mac to Mini/ Mainframe Links
☐ 14. Mac to Unix Workstation Links
☐ 15. Modems
☐ 16. Communication/ Network Software
☐ 17. Bridges/Routers/ Gateways
☐ 18. Hubs
☐ 19. NICS

Printers
☐ 21. Laser
☐ 22. Color Laser
☐ 23. InkJet
☐ 24. Color InkJet
☐ 25. Dye Sub
☐ 26. Thermal Wax
☐ 27. Plotter
☐ 28. Portable Printer

Image Input
☐ 30. Digital Camera
☐ 31. Flatbed Scanners
☐ 32. Handheld Scanners
☐ 33. Slide Scanners
☐ 34. Drum Scanners
☐ 35. Black/White Scanners

Displays
☐ 37. 14 inch
☐ 38. 15 inch
☐ 39. 17 inch
☐ 40. 21+ inch
☐ 41. LCD Projection Panel
☐ 42. Presentation Monitors

Peripherals
☐ 44. UPS
☐ 45. External Speakers
☐ 46. Input Devices
☐ 47. Video Deck
☐ 48. Image Setter

Storage
☐ 50. Photo CD
☐ 51. Magneto Optical
☐ 52. RAID
☐ 53. Hard Drive 1 Gig +
☐ 54. Hard Drive < 1 Gig

Add-In Boards
☐ 56. CD Recorder
☐ 57. Memory Boards
☐ 58. Display Boards
☐ 59. Video Digitizer Boards
☐ 60. Accelerator Boards
☐ 61. Sound Boards
☐ 62. MIDI
☐ 63. Video Capture/ Compression

99. ☐ None of the above

Signature_____

Title _____ Date ___/___/___

7B Which of the following systems and/or applications software do you specify, recommend, buy or approve the purchase of? (Check all that apply)

Graphic Arts
☐ 01. Desktop Publishing
☐ 02. Electronic Publishing
☐ 03. Painting/Drawing Programs
☐ 04. Photo Retouching
☐ 05. Page Layout
☐ 06. Illustration Programs
☐ 07. Fonts
☐ 08. Pre-Press
☐ 09. Color Management
☐ 10. Digital Video
☐ 11. Other_____ (please specify)

Multimedia
☐ 13. Authoring Software
☐ 14. Video Editing
☐ 15. Sound Editing
☐ 16. Music Composition/ Editing
☐ 17. Animation
☐ 18. Clip Media (Sound and Art)
☐ 19. Other_____ (please specify)

Presentation Graphics
☐ 21. Presentation Software
☐ 22. Multimedia Presentations
☐ 23. Charting Programs
☐ 24. Other_____ (please specify)

Design/Engineering
☐ 26. CAD/CAM
☐ 27. 2/D - 3/D Modeling
☐ 28. Simulation
☐ 29. Other_____ (please specify)

Business Applications
☐ 31. Word Processing
☐ 32. Spreadsheets
☐ 33. Databases
☐ 34. Project Management
☐ 35. Accounting/Payroll
☐ 36. Groupware
☐ 37. Desktop Video Conf.
☐ 38. Document Management
☐ 39. Mapping/GIS
☐ 40. Pen-Based Applications
☐ 41. Other_____ (please specify)

Systems Management
☐ 43. Operating Systems
☐ 44. Utilities
☐ 45. Applications Development
☐ 46. CASE
☐ 47. Programming Languages
☐ 48. Compilers
☐ 49. SQL Applications
☐ 50. Client Servers Applications
☐ 51. Other_____ (please specify)

99. ☐ None of the above

8 If you indicated purchasing involvement for computers, computer products or services in Question 7A or Question 7B, for how many Macintoshes do you have this involvement? (Select one only) Write Answer Here ➡

01. 2000+
02. 1000-1999
03. 500-999
04. 100-499
05. 50-99
06. 20-49
07. 10-19
08. 5-9
09. 1-4
99. None

9 For what applications are the Macintoshes at your location used? (Check all that apply)

☐ 01. Graphic Arts
☐ 02. Presentation Graphics
☐ 03. Multimedia
☐ 04. Design/Engineering
☐ 05. Business Applications
☐ 06. Systems Management
☐ 99. Other_____ (please specify)

10 Over the course of one year, do you specify, recommend, buy, or approve the purchase of host systems, desktops, networking products, peripheral equipment and/or software worth: (Write number in box)

1. $5,000,000 or more
2. $2,500,000 to $4,999,999
3. $1,000,000 to $2,499,999
4. $600,000 to $999,999
5. $400,000 to $599,999
6. $200,000 to $399,999
7. $100,000 to $199,999
8. $50,000 to $99,999
9. $25,000 to $49,999
10. $10,000 to $24,999
11. Less than $10,000
99. None

Product Category	For this location (Write number in box)	For other locations (Write number in box)
Host Systems (Mainframes/Minis)	A.	G.
Desktops/Portables (Micros/Workstations)	B.	H.
Networking Products (include Servers)	C.	I.
Peripheral Equipment	D.	J.
Software Products	E.	K.
Service/Support	F.	L.

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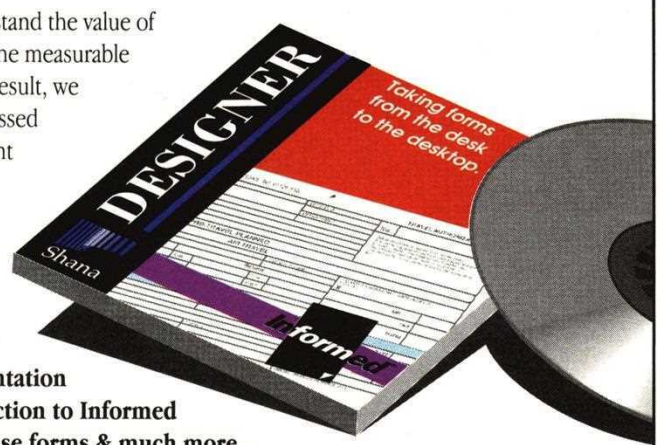

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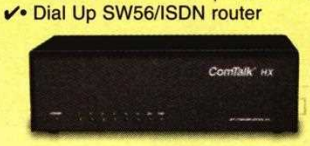

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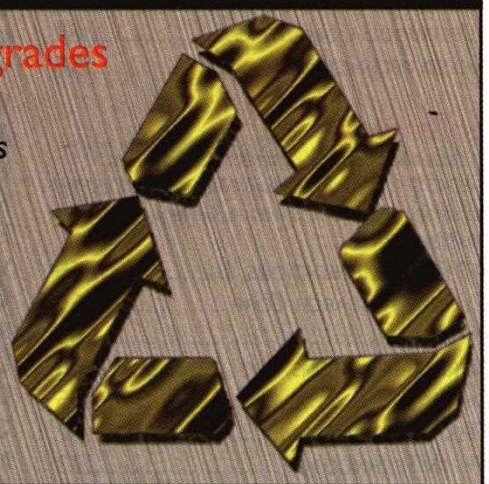

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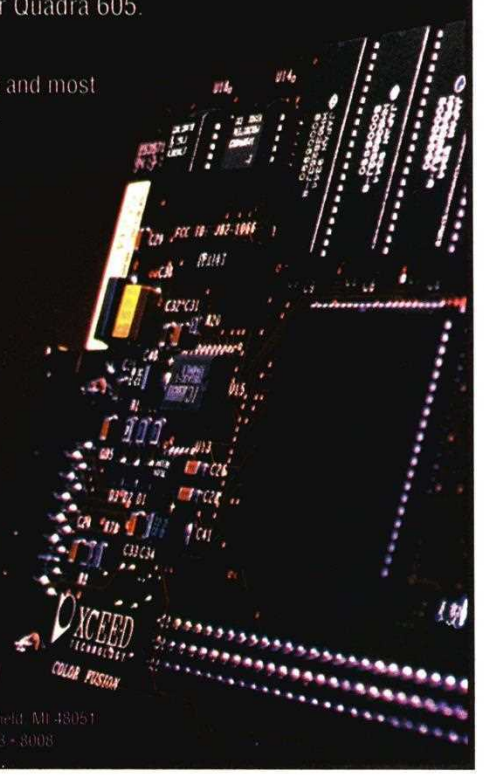

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MacUser ★★★★½

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DiiMOCache 50MHz Accelerator without FPU $389.00
DiiMOCache 50MHz Accelerator with FPU $449.00

68040 50 MHz Accelerator $799

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DiiMOCache 68040 50MHz Accelerator $799.00

68040 Processor with FPU $279

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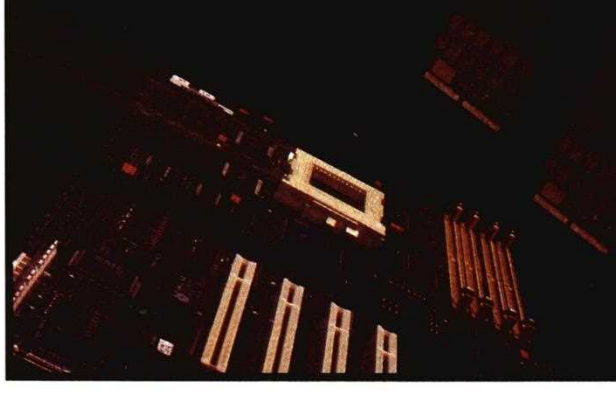

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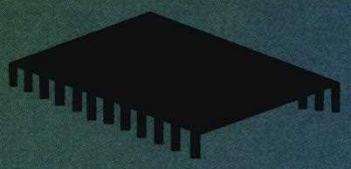

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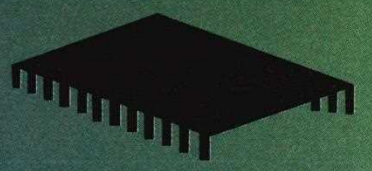

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2MB-80/70/60		70.00/72.00/74.00
4MB-70/60	(2-chip)	118/118
4MB-80/70/60	(8-chip)	134/138/138
4MB-80/70	(w/PAL)	140
8MB-70	(4-chip)	280
16MB-70/60	(8-chip)	490/495
Mac II fx SIMMs	(1,4,16 MB)	28/146/510

MAC 72-pin SIMMS

4MB-70/60	(2-chip)	130/CALL
4MB-80/70/60	(8-chip)	129/131/133
8MB-70	(4-chip)	260
8MB-80/70/60	(16-chip)	260/262/264
16MB-70/60	(8-chip/2K)	472/475
16MB-70/60	(8-chip/4K)	420/435
32MB-70/60	(16-chip/2K)	945/945
32MB-70/60	(16-chip/4K)	840/860

DIMMS (PM 9500...)

8MB-70	(4-chip)	300
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POWERBOOK MEMORY

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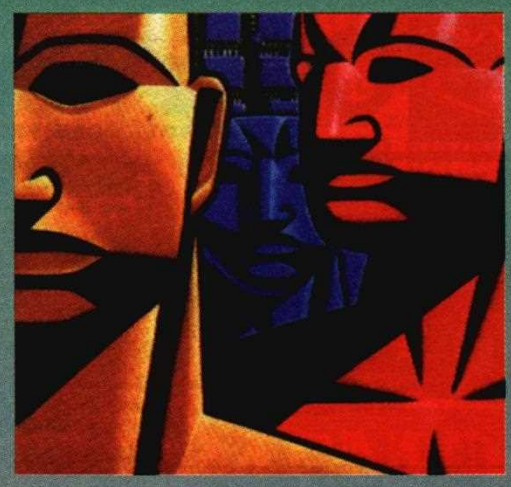

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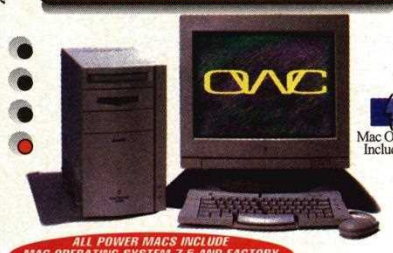

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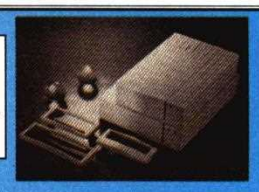

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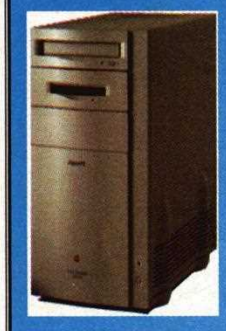

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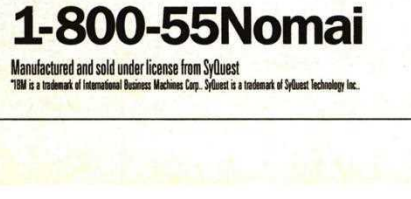

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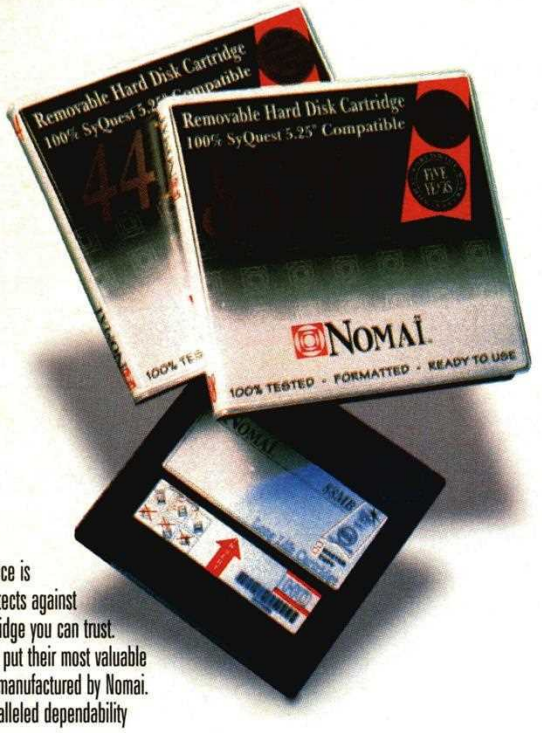

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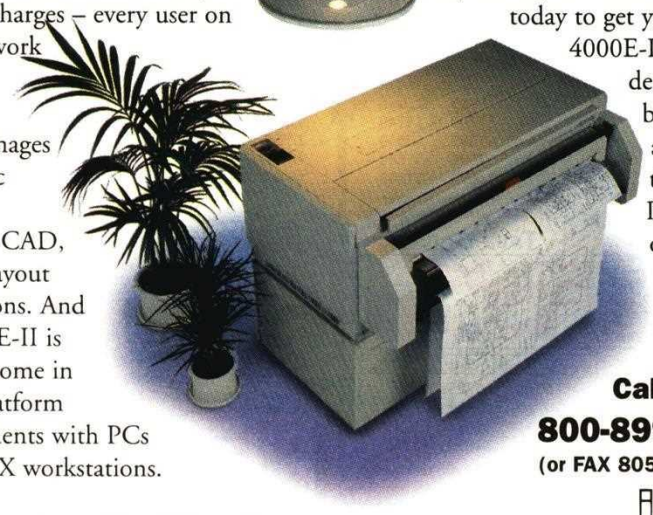

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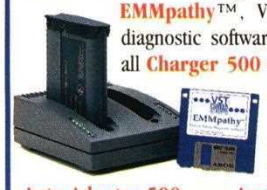

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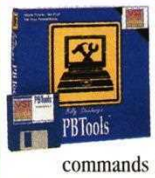

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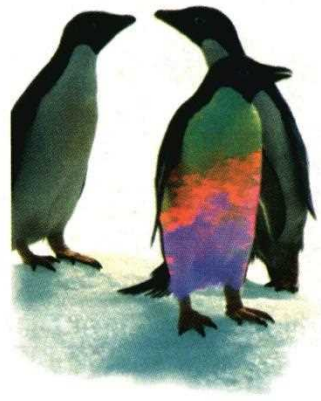

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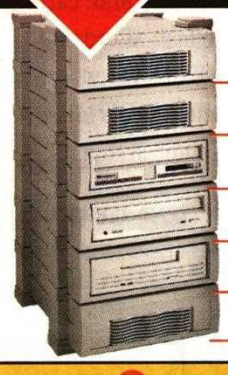

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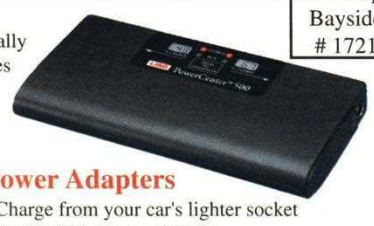

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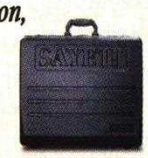

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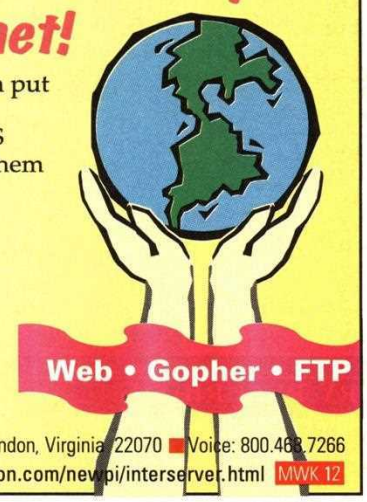

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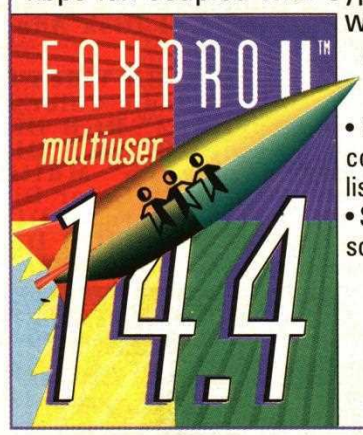

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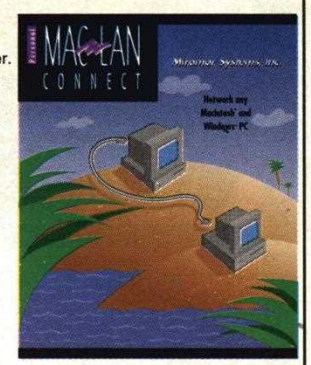

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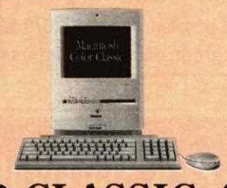

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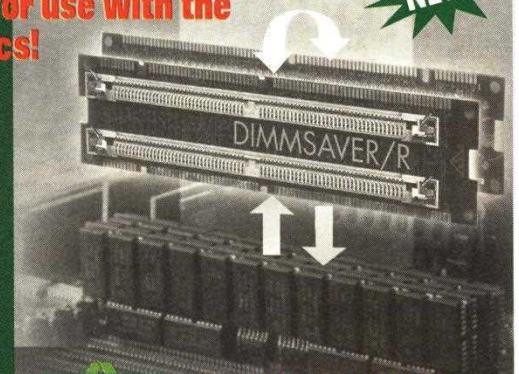

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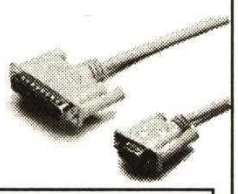

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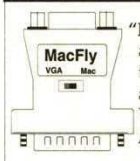

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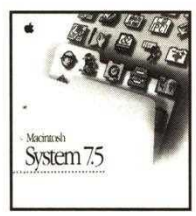

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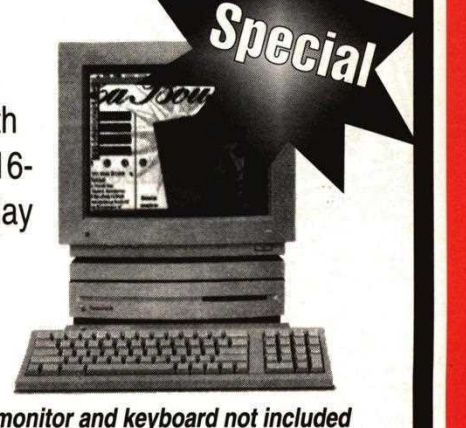

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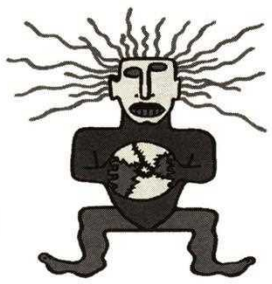

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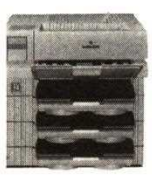

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Canvas

From Page 1

ner of the screen, sources said.

A hint bar at the bottom of the screen will show a short description of the selected tool.

Users launching Canvas 5 will reportedly be given a choice between creating an illustration, presentation or publication.

▶ **Illustration.** Canvas 5 will include many new and varied illustration features, sources said. An extensive Strokes palette will let users specify and save pen widths, arrowheads, dashes, colors and effects. A Neon stroke will draw with a gradient, creating a tube-like effect that is editable as a vector image. A Calligraphic pen palette will let users adjust pen widths, nib shapes and angles and change the lines in drawn objects on the fly.

Users will have a central repository for colors, gradients, textures, hatches and symbol fills in a new Inks palette. Gradient choices will reportedly include directional, radial or linear blends of multiple colors. Users will be able to drag along a compass to select the gradient's direction and save gradients into a palette, sources said.

Users will be able to create fills out of objects that can be scaled, staggered or rotated as they are repeated in the fill. By choosing Append for an imported image, users will be able to bring all colors in the image into the Ink palette.

Offering QuickDraw GX-like controls, Canvas 5 will let users choose from Intersect, Outline, Add, Transparent and other options for interaction between colors and outlines of intersecting objects.

An Illustrator-like layers capability will include password protection for editing layers, as well as layer locking, unprintable layers and hidden layers, sources said.

Mimicking some of the emerging plug-ins for Adobe Illustrator and Macromedia FreeHand, Canvas 5 will offer templates for envelope transforms that can be applied to vector objects. The upgrade will also let users skew, distort and rotate images by dragging handles when using a Freeform command, sources said. Users will be able to set, save and apply graphic object styles that include outline type, colors and gradients.

▶ **Image editing.** Extensive new image-editing tools are also planned, sources said. They will include a Magic Wand, Eyedropper, Airbrush, pressure-sensitive Marker tool, Clone tool and Sponge. Many tools will have adjustable settings, such as brush shape choices and opacity controls. Canvas 5 will reportedly accept Adobe Photoshop plug-ins and will offer color controls such as hue, contrast and saturation.

▶ **Page layout.** Sources said Canvas 5 will jump feet first into the realm of page layout. Users will be able to control type settings, such as baseline, scaling, kerning, hyphenation and spacing; both paragraph-level and character-level styles will be offered.

▶ **Presentation.** Canvas 5's presentation capabilities will combine use of all the tools and functions in the application's other areas, sources said. With both slide show and manual presentation options, Canvas 5 will include 20 preset transitions and fit-to-screen capability.

Deneba declined to comment. □

Performa

From Page 1

internal quadruple-speed CD-ROM drive, keyboard, mouse, and Global Village Communication Inc.'s PowerPort/Gold 14.4-Kbps internal fax modem.

The 6200 models range in price from $2,399 to $2,999; the 5200 units cost $1,999 to $2,299. Price differences are based on included optional hardware, such as the 15-inch Apple Multiple Scan 15 monitor, the Apple Video System, Apple TV/Video System and new Apple MPEG Media System. In what could be seen as a negative move but one giving dealers greater flexibility, selected 6200 series models are the first Performas to be sold without a monitor.

Also making its debut this week is the DOS-compatible Performa 640CD, priced from $2,299 to $2,349. The unit is a Performa 630 with an LC processor direct slot card housing an Intel 33-MHz 486 DX2 processor.

The Apple MPEG Media System is a $299 LC-PDS card that allows Performa 630-based machines to play back VideoCD, CD-I movies and other MPEG files at 640-by-480-pixel resolution through pixel-doubling (see MacWEEK, Aug. 8, 1994, Page 1). Apple also announced shipment of the eWorld World-Wide Web browser, bundled with the new machines.

According to Apple and supported by recently quoted retail prices, the new models match, if not beat, the pricing for similarly configured consumer offerings from the top Intel-standard competitors (see chart below). For example, for about $1,999, the price of the Performa 5200, Packard Bell Electronics Inc. provides a 60-MHz Pentium-based model with a 8/850/4xCD configuration, 14.4 Kbps modem and 14-inch monitor. Units from Compaq Computer Corp., Hewlett-Packard Co. and AST Research Inc. matched up similarly.

Equal comparisons exist between 486-based PCs and the new Performa 630 models.

"These are going to be extremely popular machines," said Ken Krich, president of ComputerWare, a Palo Alto, Calif.-based reseller.

While this may be positive news for Apple's revenues, increasing the company's market share among home users may hinge more on improving its image. According to a study conducted by Apple Customer Analysis from January to March 1995, Apple has a positive image among 75 percent of home computer buyers. Among business buyers, the same 75 percent rating puts the company in the top tier. But among home users, for whom brand names are far more important, Apple's rating ranks near the bottom. The study added that home users held a more neutral opinion on Apple than on any other personal computer brand, which could indicate an ambivalence toward the platform.

Apple plans to address this issue through aggressive pricing and a 50 percent increase in advertising. Keith Fox, vice president of worldwide home marketing, said Apple's Performa product shortages will be a thing of the past. He said he expects a significant increase in sales with this new lineup, particularly in the fourth quarter of 1995. □

Clifford Colby contributed to this report.

How the Performa 5200CD stacks up

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Configuration	8/800/4xCD	8/725/4xCD	8/850/4xCD
Extras	14.4-Kbps modem, 15-inch monitor	14.4-Kbps modem, 14-inch monitor	14.4-Kbps modem, 14-inch monitor

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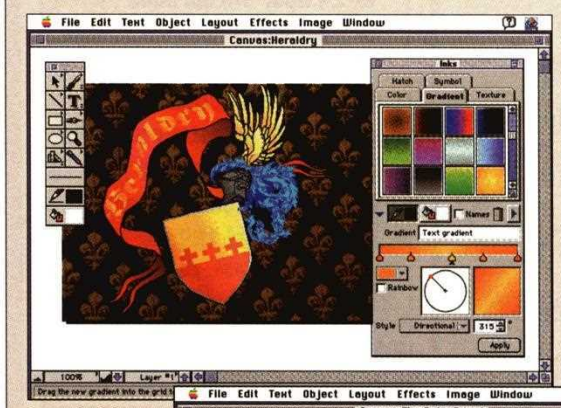
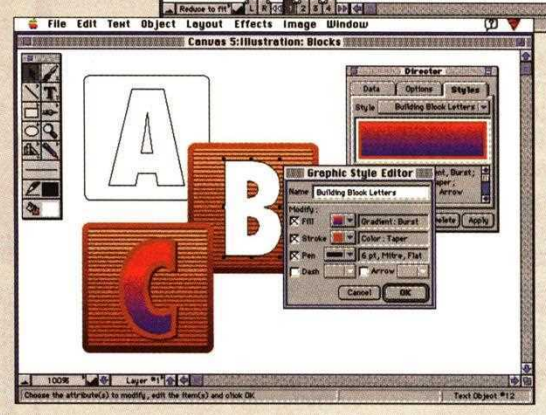


Canvas 5's gradient editor will let users create linear, radial, directional or custom gradients.

Text-layout capabilities will let users define columns, set styles and make drop caps.



Users will be able to grab graphic styles from objects, save them and drop them onto other objects.

Oracle

From Page 1

$395, and the client-server version will be $1,995 (see MacWEEK, Jan. 23, Page 10).

The agreement, in the works for months, will give Apple an immediate competitor to Microsoft Corp.'s Visual Basic and Access duo, which the Redmond, Wash.-based company has promoted for client-server use. Apple's co-development deal with Armonk, N.Y.-based IBM for its Visual Basic-like environment, code-named Denali, is not expected to bear fruit until mid-1996 (see MacWEEK, May 15, Page 1).

Sources close to Redwood Shores, Calif.-based Oracle said the deal will mark the first time Apple agreed to put its label on another company's software while allowing the original vendor to continue selling it.

Oracle plans to sell Power Objects through its direct sales force and a new World-Wide Web server called the Oracle Object Marketplace. The Marketplace will be an on-line store for buying and selling Power Objects components and OLE 2.0 objects for Intel-standard PCs.

The Power Objects announcement will come only a week after Oracle's launch of the SmartClient 10 update to its financial applications suite. The new version will comprise multimedia, mobile and Internet-based commerce capabilities; the new features will initially be released for PCs but will be rolled out for Macs over the next 16 months, Oracle said.

SmartClient 10 will allow multimedia objects to be embedded into any electronic business document. Oracle Mobile Agent, a radio technology, will allow laptop users to communicate with a SmartClient server over a wireless modem.

SmartClient 10 will also sport a new graphical user interface, and integration with Oracle's core database functionality has been enhanced, according to Jim Shepherd, analyst with Advanced Manufacturing Research Inc. in Watertown, Mass.

Apple declined to comment. □

Clifford Colby and Stephen Howard contributed to this report.

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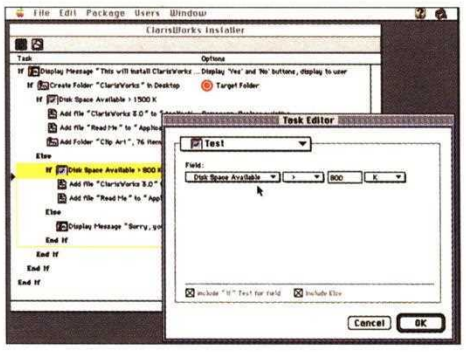

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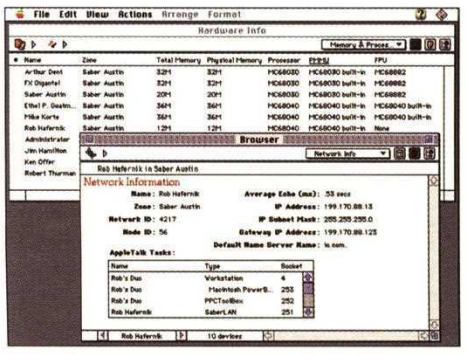

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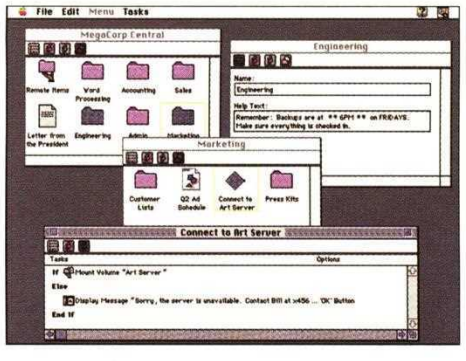

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PageMaker

From Page 1

and for Windows in fall, we have a hint of an answer: consistency with other Adobe applications, high-end color-savvy features and on-line distribution tools.

After working with a beta version, we can safely say that PageMaker 6.0 won't induce the professional publishing community to delete QuarkXPress from its hard disks. But improvements such as multiple-master pages and color management should deter PageMaker users from switching to Quark Inc.'s product. Existing users will be able to upgrade for $149; it will be free to users who bought PageMaker 5 after June 17.

Adobe makes its mark

PageMaker 6 bears the subtle stamp of an Adobe product. Only a shadowy ghost of Aldus Manutius appears on the splash screen. PageMaker's monochrome, horizontal toolbox has been given a gray, 3-D look and a vertical orientation. A new Zoom tool uses Photoshop-standard keyboard shortcuts. Redesigned palettes are compact and iconic like those in Illustrator. Additions are now called Plug-ins, and Photoshop filters are supported.

A new pull-down menu brings PageMaker much-needed features already found in XPress. The Arrange menu contains the new Bring Forward and Send Backward commands, which let you navigate one layer at a time. Alignment and distribution features formerly available as plug-in modules are now integrated into PageMaker. Best of all, under Arrange you'll find commands for locking object position and true grouping and ungrouping of objects.

Key new features have been added to PageMaker's Element menu. A polygon tool lets you create many-sided polygons, star bursts and so on. You can designate items as nonprinting, useful for marking FPO (for position only) items and noting special printing instructions. And a new Mask command lets you mask images or text with circles, rectangles, or polygons drawn in PageMaker.

PageMaker users need no longer envy XPress users' ability to create multiple master pages. PageMaker's implementation is elegant and powerful. A new palette lets you define master pages for single pages or spreads and then apply them independently to left- or right-facing pages over a noncontiguous range of pages. And you can design a page and then elect to save it as a master page, something you can't do in XPress.

PageMaker also lets you save common printer settings as Printer Styles, a real timesaver. Adobe has also resurrected the Table Editor, an OLE-savvy stand-alone utility that lets you create and edit tabular materials within PageMaker.

Anyone who has ever worked with Photo CD images will relish PageMaker's ability to directly acquire and automatically sharpen them, thus eliminating the time-consuming step of first opening Photo CD images in Photoshop.

Given the hypefest about publishing on the Internet, Adobe is smart to serve notice that PageMaker will embrace the on-line future. In Version 6 you can save documents as Acrobat Portable Document Format files. It also ships with an HTML (Hypertext Markup Language) filter.

Color them happy

As the first page-layout application to offer trapping and color management, XPress has had the reputation of offering more to color-publishing professionals. With PageMaker 6.0, that's changing. Promised in PageMaker 5.0, an integrated color-management system finally makes its debut in this version.

PageMaker 6.0 ships with the Kodak Precision Color Management System, a color-matching technology previously available in Eastman Kodak Co.'s high-end publishing workstations. The Precision system lets you select profiles for all your input and output devices and choose a source profile when importing bit-map images. You can plug any color-management system into PageMaker and use any device profile compliant with the International Color Consortium standard.

PageMaker 6 offers more options for creating and printing colors. It lets you define colors as tints of existing colors so you can have access to consistently used tints at all times. It also supports HiFi Color printing, in which six or more process colors are used for wider tonal reproduction.

A real boon for color publishers is the integration of the former TrapMaker Addition into the program. PageMaker 6's trapping capability, which intelligently determines ink density and applies traps based on lightness of adjacent colors, is simply superior to XPress' one-size-fits-all implementation.

Now we are 6

These are some of the top-line features in PageMaker 6. The program has plenty of small but solid improvements, many of which will enhance productivity and streamline operations. A sizzling revision it's not.

It's too early to predict what will be in PageMaker 7, the rewrite under construction that presumably will share core codes and competencies with other Adobe products. But we have some suggestions. PageMaker's free-form approach to layout is more flexible than XPress' frame-based model, but the latter makes it easy to implement circular or odd-shaped text boxes. PageMaker still doesn't have automatic text wraparound for basic circles, much less images with clipping paths, and instead requires laborious hand-tweaking of bounding boxes.

PageMaker is a steady, reliable, hard worker with lots of untapped potential. But the question is: How much can Adobe keep dressing it up? And if it undergoes a complete transformation, will it lose its soul? We're waiting anxiously.

Adobe Systems Inc. of Mountain View, Calif., can be reached at (415) 961-4400 or (800) 422-3623; fax (415) 961-3769; http://www.adobe.com. □

Pamela Pfiffner is executive editor for news and graphics at MacUser.

PowerBooks

From Page 1

the 5300's housing but based on a 68LC040 processor also are expected. However, sources said, none of these systems will be available until well after Aug. 28.

While delivering all systems at launch may prove to be beyond Apple's grasp, sources said, the company is also being confounded by the performance of some of the PowerPC portables.

According to Apple, the goal for the new PowerPC PowerBooks was to at least equal the speed of a Power Mac 6100/66 on all models. However, sources said, the one RISC PowerBook that Apple has completed testing, the high-end 117-MHz 5300, is matching 6100/66 numbers in overall performance, well below the speed of 90-MHz Pentium portables just around the corner.

Apple's new PowerBooks may find more than their speed being challenged by Intel-standard PC contenders. The 5300 series will sport the newest features in the line, including an infrared transceiver for wireless AppleTalk, a removable floppy drive exposing a media bay and two Type II PCMCIA slots. Still, those features pale in comparison to forthcoming laptops from IBM Corp., Compaq Computer Corp. and Gateway 2000 Inc.

IBM's ThinkPad line will include units powered by 75- and 90-MHz Pentium processors and tout amenities such as removable backlighting so the display can be used with an overhead projector, an expandable keyboard that extends to full size and infrared networking.

Compaq's new Elite line will feature the same Pentium processors and 11.3-inch active-matrix displays as well as removable 5.25-inch CD-ROM drives; the 5300's media bay can accommodate only nonstandard 3.5-inch CD-ROM drives. Gateway will offer PCI interfaces and a similar media bay behind the floppy drive that also accommodates a full-sized CD-ROM drive and allows the floppy drive to be used externally.

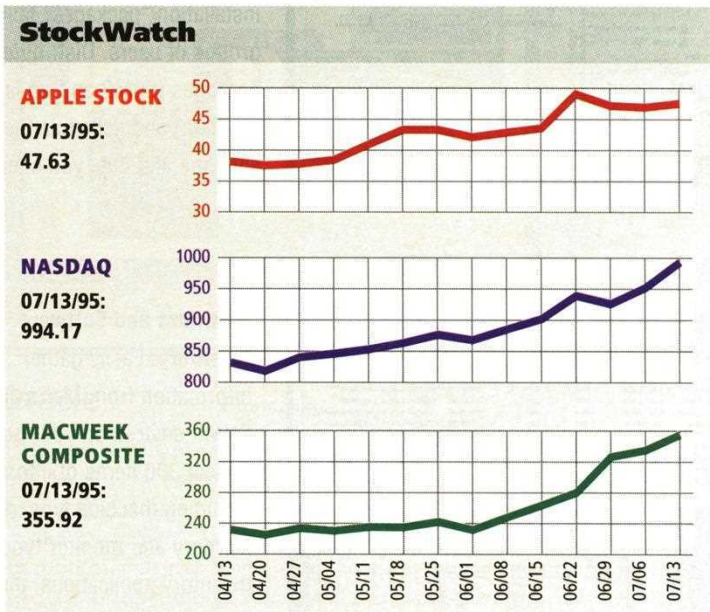
But analysts said head-to-head comparisons between PowerBooks and Intel-standard laptops aren't likely to send potential Apple buyers into the arms of PC makers. "I'd be more concerned about what message this sends to the [Mac] installed base," said Mike McGuire, an analyst at Dataquest Inc. of San Jose, Calif.

According to research compiled by Apple Customer Analysis from January to March 1995, user awareness of the company's laptops is almost 40 percent lower than that of desktop Macs (14 percent compared to 23 percent). The slide has been especially vexing in the small-business segment, where brand awareness for PowerBooks decreased from 21 percent to 15 percent, the report said.

The survey, called U.S. Business Portable, did contain several nuggets of good news for Apple: Mac portables received high grades from users for quality and processing power. More heartening are figures released by Computer Intelligence InfoCorp last week that show Apple and Gateway 2000 tied for first among U.S. users for brand loyalty and repeat purchases in 1994.

Apple declined to comment. □

StockWatch



	07.13.95 CLOSE	WEEKLY % CHANGE
Apple	47.63	1.33
MacWEEK Composite*	355.92	5.97
SOFTWARE DEVELOPERS		
Adobe	58.56	-0.53
Caere	8.75	1.45
CE Software	2.41	-3.75
Graphsoft	6.13	11.36
Intuit	83.00	9.21
Macromedia	50.00	16.62
Microsoft	100.13	7.95
Novell	21.50	9.90
Oracle	40.75	3.49
Saber	9.50	8.57
Symantec	25.94	-0.24
STORAGE		
Conner	14.00	10.89
Iomega	24.75	10.00
Maxtor	5.69	0.00
Pinnacle	14.38	19.79
Quantum	26.63	12.11
Seagate	44.88	10.80
SyQuest	12.88	-2.83

	07.13.95 CLOSE	WEEKLY % CHANGE
PERIPHERALS VENDORS		
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Asanté	4.88	2.63
Focus	2.13	-19.05
Global Village	18.06	6.25
HP	83.63	5.85
QMS	4.75	-5.00
Radius	12.50	0.000
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IE	13.63	-3.54
Merisel	8.00	-1.54
Tech Data	14.00	20.43
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IBM	103.88	5.06
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Solutions: Developer tools for installing, updating and debugging.

JULY 31

Solutions: A buyer's guide for V.34 modems.

AUGUST 7

Special Report: MacWEEK's annual survey of the top 200 Mac business sites and the top 50 Mac education sites is updated with a look at Mac clones.

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- Aperture Technologies Inc.'s Aperture 5.0
- Software Ventures Internet Valet
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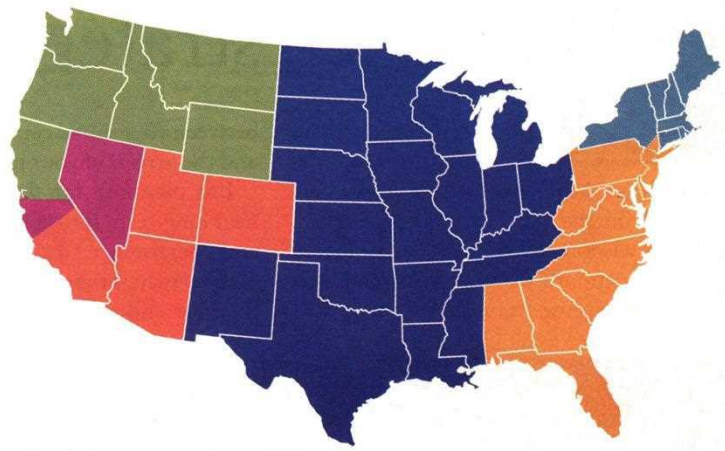

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Snarled strategy stalls Shiner server

With all these new Macs looming just on the horizon, it's difficult not to lose proper perspective on the big picture. Contrary to popular wisdom, there's more to the future than next month's PowerBook and PCI Mac announcements or the length of time between your initial contact with the Knife and the arrival of your just reward.

But planning for the future, even the near long-term future, requires both vision and persistence. Long, long ago, the Galileo space probe was just a dream dared by those endowed with an extra measure of vision. Now, its mission nearly accomplished, Galileo is about to plunge into the atmosphere of Jupiter at four times the speed at which re-entries into the earth's air are usually accomplished.

It's beginning to appear that even the searing conclusion to our most ambitious space probing will fade to dim memory before we see the Oracle7 Workgroup Server for the Power Mac. The operative concept here isn't later rather than sooner, but whether. Just as politics was one of the forces that caused the Galileo project to veer off schedule years ago, there's no technological impediment hindering the release of Oracle7.

It's just that there's little incentive to move forward with Oracle7 if there is no coherent server strategy at Apple. And it's not just that Apple higher-ups have had second thoughts about its Novell NetWare project and the Shiner hardware that goes with it. Pre-press houses want it, but does anyone else? The real problem is Apple's apparent inability to devise a sensible server strategy that it can stick to for a long weekend.

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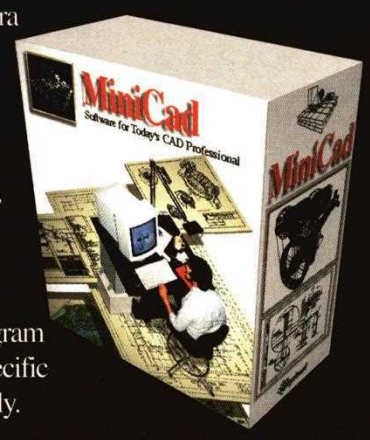

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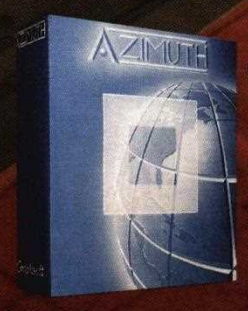

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Happy feet

Getting a steady beam on pricing of new Macs prior to their official introduction requires all the skills the Knife can summon, sheer luck among them. The application of so much energy has once again yielded results. Considering that after the last PCI-based Mac pricing story the Knife had to take the responsible writer to the back room for a good spanking, we can assume his own ducks are properly aligned with his calculator in this report.

The PCI-based follow-ups to the somewhat tony 9500 twins should have street prices more in keeping with the budget. Expect to cough up $3,899 for the well-equipped 8500 and about $2,599 for the 7500. For those of significantly lesser means, the 7200 in a standard configuration should command $1,599.

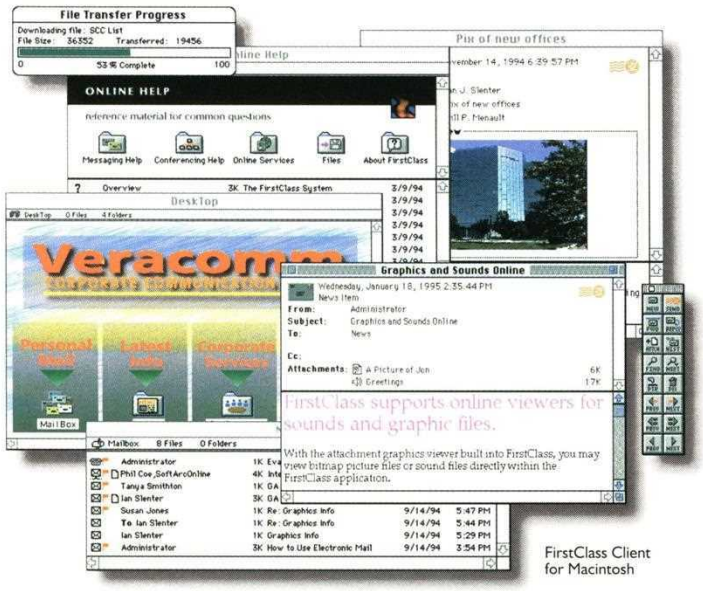
One cellular voice

When the 5300 series PowerBooks roll out Aug. 28, expect to see the usual gang of third parties make the scene, each touting its own particular portable enhancements. And no gathering of this type would be complete without Global Village; it's no surprise the company has a peppy little modem it plans to simul-release.

Those who thought Global Village ran an airtight ship might be surprised to read that it is also considering announcing a PCMCIA-based wireless modem at the same time. Among the reasons why the announcement could be postponed is the small issue of which cellular carrier to use.

The Knife has also received early reports that the new PowerBooks dig into ground first plowed by the PowerBook Duos — opening one up is a task not for the mechanically challenged. In fact, it would save you more than money if you just went ahead and had the RAM upgraded to a more reasonable figure before you take possession. It could keep any toddlers you may have lurking about the house from learning one or two choice words you might not want to hear them use at the next Sunday school picnic. □

There's a word or two for those who don't earn a MacWEEK mug by contacting the Knife at (415) 243-3544, fax (415) 243-3651, Internet (mac_the_knife@macweek.ziff.com), AppleLink (MacWEEK) or CompuServe/ZiffNet/Mac with the details of that hot tip, but we can't print them.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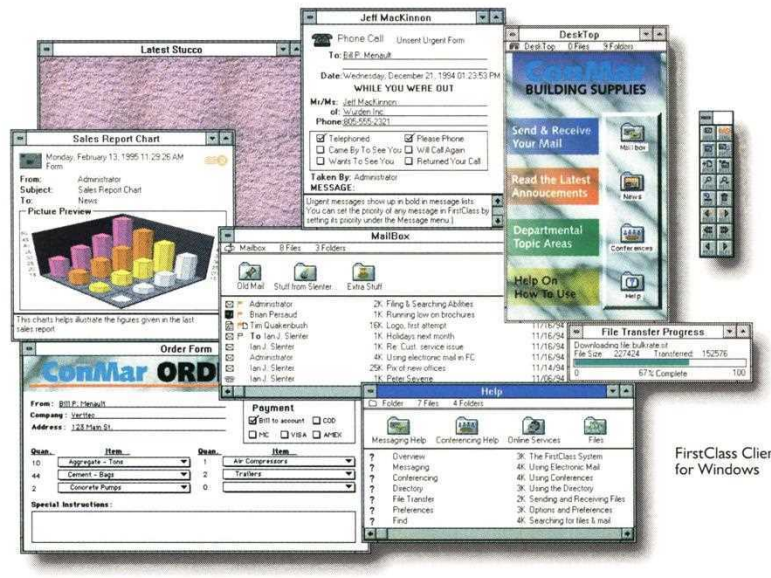

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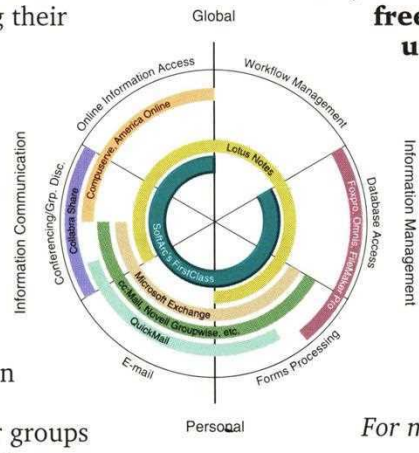

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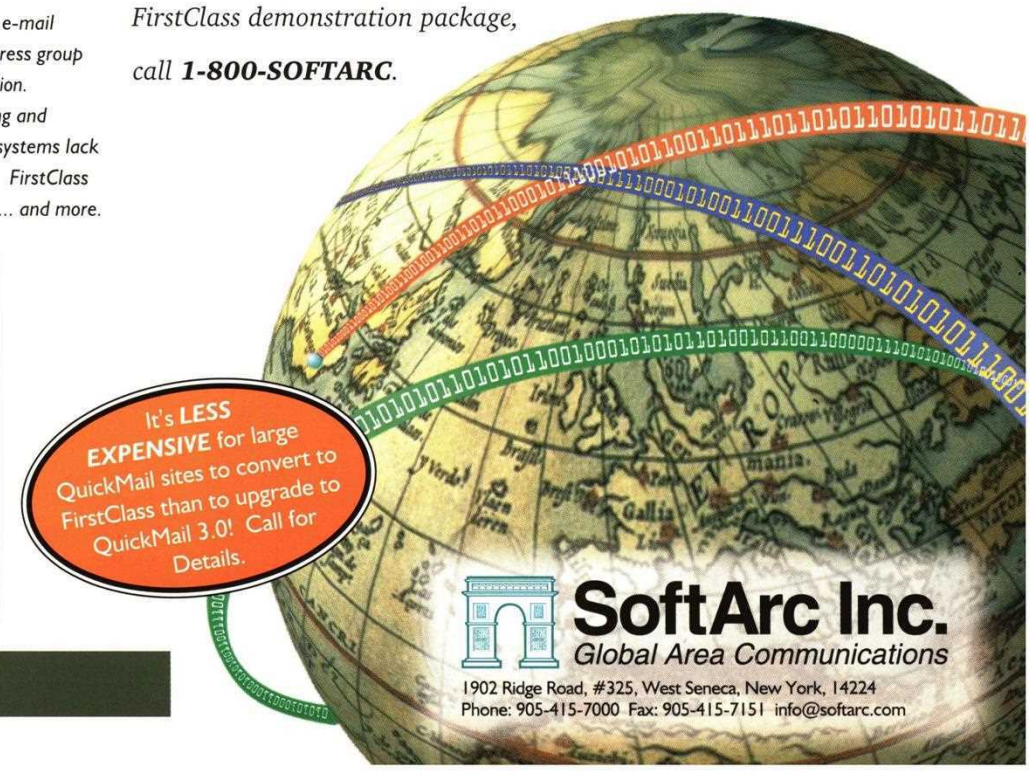
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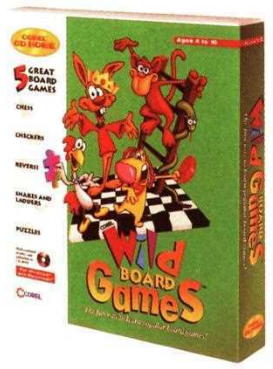

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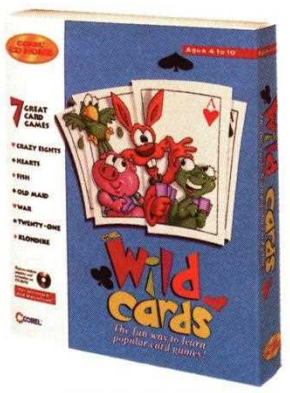

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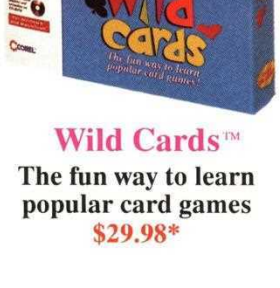

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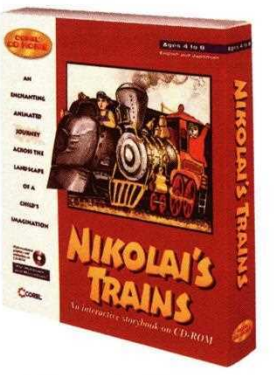

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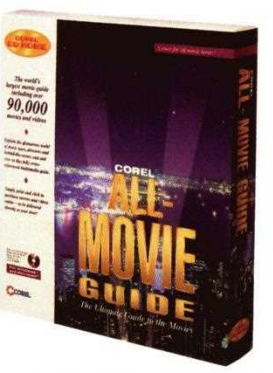

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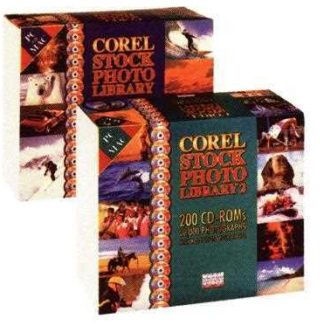

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